TEXTILE BULLETIN

VOL. 64 AUGUST 15, 1943 NO. 12

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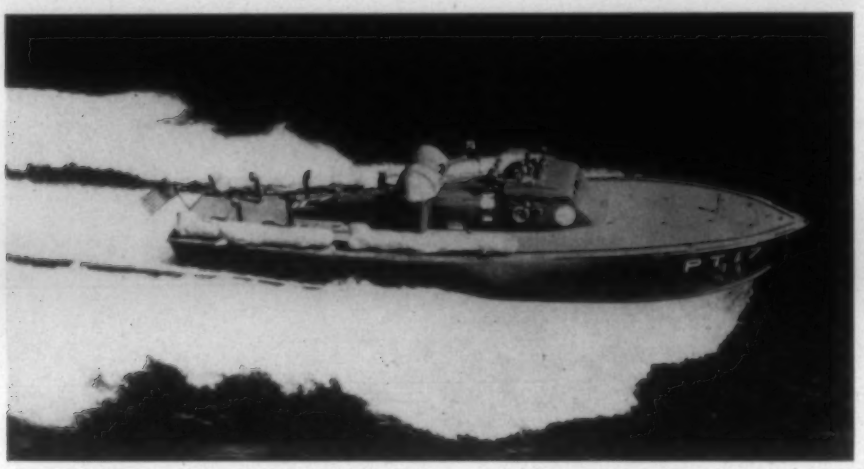


Much Can Depend Upon "Little Things"

A "P. T." looks rather insignificant when ranged along side a modern battle wagon. But these speedy boats have carried out special assignments which larger units could not have undertaken and they have played an important part in our naval successes.

Ring Travelers are the midget members of the Spinning Fleet. But these little fellows play a vital role in the day in and day out battle for quality yarn production.

Don't underestimate the importance of those "R. T.s" in your mill. Make sure they are uniform in weight, size and quality by specifying Bowen Patented Bevel Edge and Universal Standard Ring Travelers.

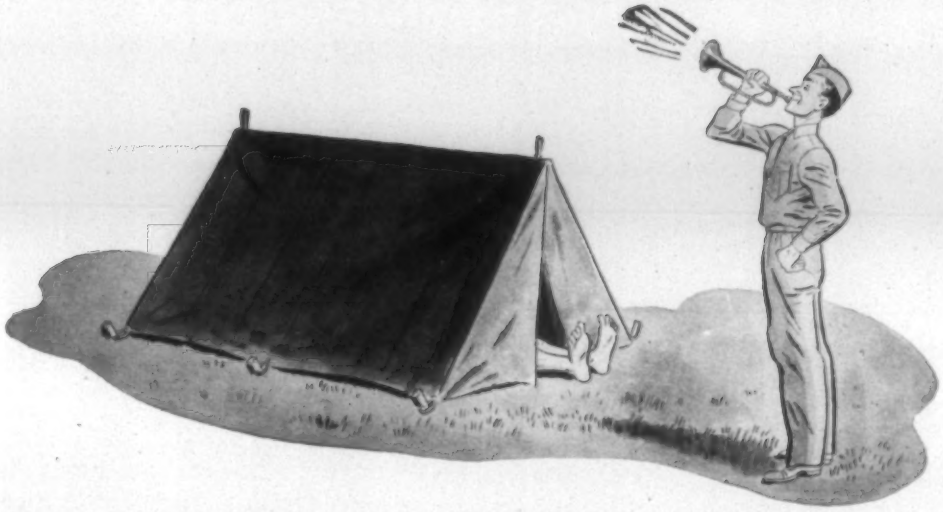
Write for Samples

U.S. RING TRAVELER COMPANY

AMOS M. BOWEN, President and Treasurer

PROVIDENCE, R. I. GREENVILLE, S. C.

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.



Vat Dyes ARE IN THE ARMY TOO

When Uncle Sam issues specifications for Army clothing, only the best will do.

That's why vat dyes are specified for items that must maintain color fastness under extreme service conditions—items such as shirts, field jackets, jungle trousers and jackets, and ski parkas. They need the color fastness of vat dyes—their ability to withstand hard wear, repeated launderings or cleanings and outdoor exposure without loss of good appearance.

Civilian clothing, to be completely satisfactory, also needs color fastness. Men and women in the military forces are witnessing daily proof of the fact that color fastness can be obtained—is being obtained right now. When these people return to civilian life, they will expect the same high standards of color fastness they have in the Army.

General efficiency, methods of application have progressed tremendously during the accelerated pace of wartime developments. The use of vat dyes on new fibers and blends of fibers will point the way to bigger markets after the war.

Du Pont has the knowledge and the experience necessary to select the right dyestuffs and to show you how they can be used most effectively and most economically. Come to du Pont for aid on your fast color problems. Our technical men offer you their "know how." E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyestuffs Division, Wilmington, Delaware.

DU PONT DYESTUFFS

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

HERE IS MAXIMUM WEAVING EFFICIENCY

SYNTHAROL COTTON WARP SIZE COULD HELP MAKE IT YOUR WEAVE-ROOM!

Row on row of smoothly operating looms means a successful size is at work. **SYNTHAROL** is helping to establish maximum weaving efficiency at a minimum cost in many mills today!

SYNTHAROL offers weavers a successful, highly concentrated and completely balanced Cotton Warp size . . . a pioneer size developed by AHCO's research men.

SYNTHAROL is economical and easy to prepare and is suitable for use on all types of Cotton Yarns.

Ask for the complete story on this leader of Cotton Warp Sizes.

SYNTHAROL meets rigid standards for military fabrics.

There are also **SYNTHAROL** formulas for slashing yarns for all types of civilian fabrics.

ARNOLD, HOFFMAN & CO., INC.

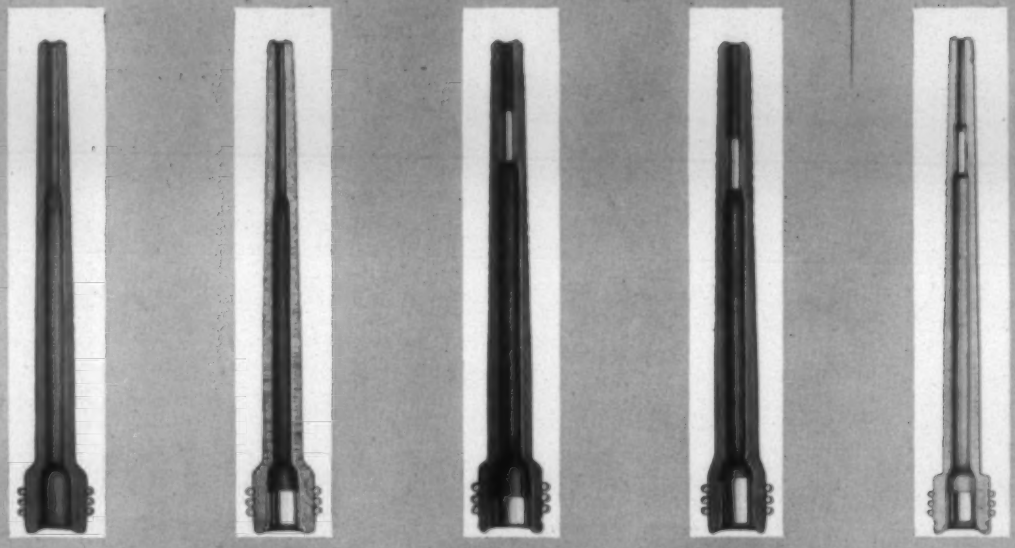
Established 1815 **PROVIDENCE, R. I.** Plant at Dighton, Mass.

NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE

AHCO Syntharol

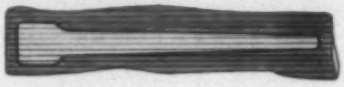
THE PIONEER CONCENTRATED COTTON WARP SIZE

WHY METAL FITTINGS...



Without Bushing | Bottom Bushing | Combination Shield and Bushing | Top and Bottom Bushing | Top and Bottom Bushing and Metal Tip

Save Wear - Eliminate Reaming Expense! Prevent Splintering and Reduce Breakage!



With U S "split" stock the turning follows the grain. Makes stronger, smoother, better balanced, truer running, longer lasting bobbins.

THE SEAL OF QUALITY AND SERVICE SINCE 1857 — US

Advantages outweigh the added cost of bobbins with base and top bushings, and metal tips. Fittings pay their way in longer bobbin life, truer running, more uniform yarn, less yarn lost, fewer bobbins to replace per year.

Metal bushed bobbins do not wear loose on spindles or freeze to them, making reaming necessary. They stay at the right height on the sleeve or cone of spindles. Bushings and shields protect against quick wear when clutch spindles are used.

When bobbins are conditioned, it is advisable to use top as well as base bushings. Bushings eliminate reaming and prevent vibration and wobble, because closer tolerances can be obtained. Add metal tips and the bobbins are stronger and less subject to splintering and breakage.

U S makes spinning bobbins to precise specifications from straight grained "split" stock. The only textile accessories manufacturer making their own metal fittings, U S can supply metal fittings designed to meet your exact needs.

Our U S Textile Accessories include improved types of Bobbins, Shuttles, Spools, Cones, Rolls, Tubes and cardroom Bobbins and Skewers. Consult our technically trained representative on ways and means for speeding up mill production and cutting down maintenance costs.

U S WHY No. 3. Watch for More U S Whys in these pages

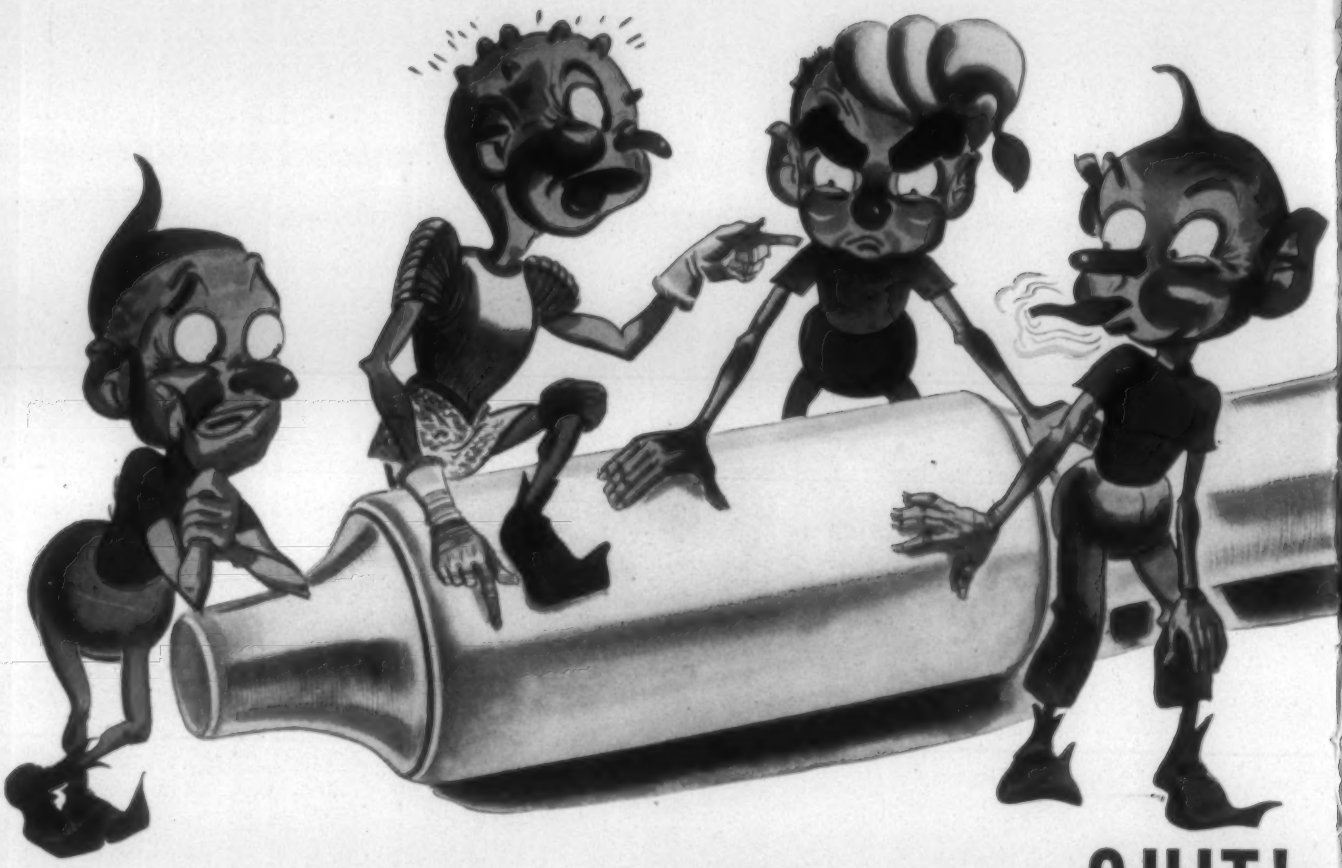
U S BOBBIN & SHUTTLE CO.

LAWRENCE, MASS.

PROVIDENCE, R. I. JOHNSON CITY, TENN. GREENVILLE, S. C. CHARLOTTE, N. C.

CHICAGO AGENT: Albert R. Breen, 20 E. Jackson Blvd. CANADIAN AGENT: W. J. Westaway, Montreal

ALABAMA AGENT: Young & Vann Supply Co., Birmingham



WHY THE SPINNING FRAME GREMLINS QUIT!

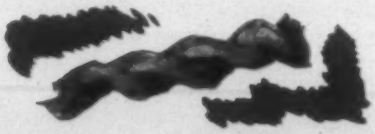
"I've been beating my brains out on those rolls and what happens?" complained Hard Ends. "That Spinna Calf acts as if nothing had happened at all. Springs right back without a *trace* of a groove."

"Hollowing-Out" was equally dejected. "I've never seen anything like it for resiliency. What's the explanation?"

"I understand," offered Eyebrows, "it's because Spinna Calf is triple-resilient."

"Triple-resilient? What does that mean?"

"It's sort of complicated," admitted Eyebrows. "But here — Spinna Calf is made up of fibres. The fibres are twisted together into bundles. And the bundles are twisted together, every-which-way, leaving air in-between. So what you've actually got is a whole bunch of air cushions surrounded by springy fibres."



"And that's why Spinna Calf is triple-resilient?"

"Sure. When Spinna Calf is depressed, it 'gives' in three respects. The air moves out of the way. The individual fibres compress or bend. And the whole network of fibres adjusts itself, distributing the strain. Then — when the pressure is relieved, what happens? The air returns. The fibres spring back to original length. And the bundles recover their formation. No harm done — no permanent after-effects."

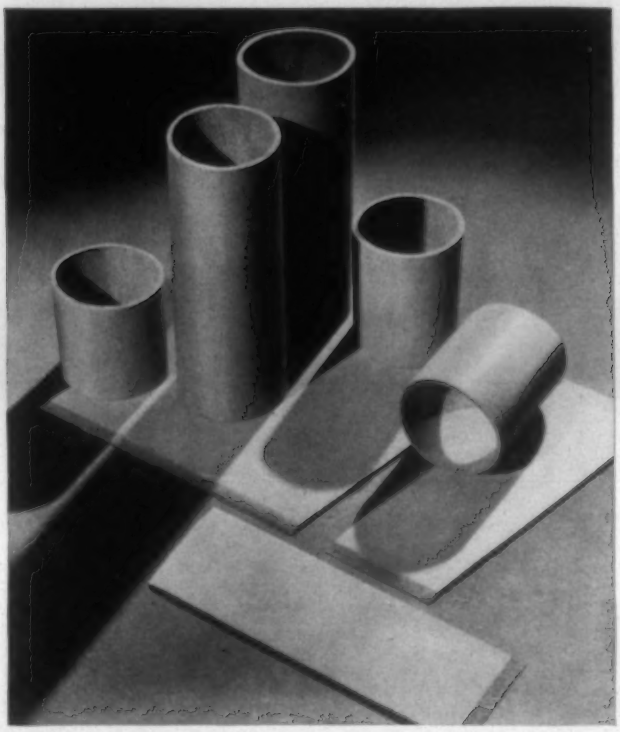
"And this is a special property of Spinna Calf?"

"Yes. Being calfskin, Spinna has the ability to 'give', then recover. Being Spinna, it has a stronger wearing surface on top of its cushion. And being Lawrence, it has a more positive drafting surface, 'no-static' finish, and more dependable uniformity."

A. C. LAWRENCE LEATHER CO. RELIABLE LEATHERS PEABODY MASS

Lively SPINNA CALF *It's Triple Resilient*

ROLL COVERING



Used on more Spinning and Roving Frames than any other Brand!

Why will you find more spinning and roving frames running with Lawrence Chrome Leather aprons than with any other brand? Why do more mills specify Lawrence Chrome for apron replacements than any other brand?

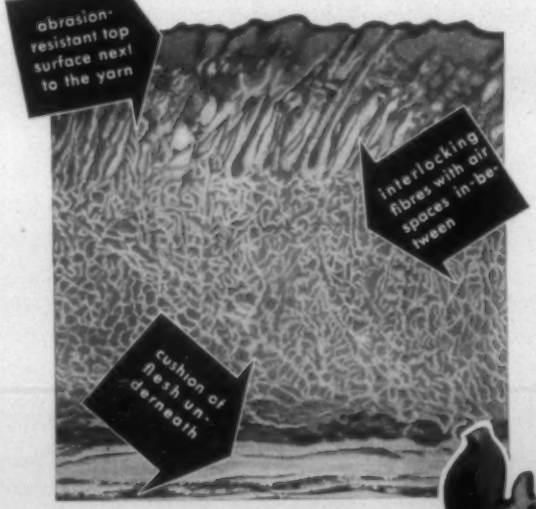
- Lawrence Chrome lasts longer than any other type, reducing costs, saving replacement time.
- Lawrence Chrome holds its shape longer—no lengthwise, *no lateral* stretch to cause belling.
- Lawrence Chrome is not affected by oil—unlike oil-resistant materials which deposit oil spots on the yarn.
- Lawrence Chrome is the superior leather tannage for drafting—a natural drafting surface, smooth, but high in frictional characteristics.
- Lawrence Chrome reduces troubles due to static.

And, of course, Lawrence Chrome aprons are more convenient—can be replaced individually.

Most important of all—apron manufacturers know that Lawrence quality is more uniform. They can cut their aprons with greater assurance of giving you satisfactory performance.

Lawrence Chrome Leather is standard with Whitin Machine Works. Specify Lawrence Chrome on your next order to your apron supplier . . . you can be sure of getting the best possible drafting results.

Spinna Calf.. AIR CUSHIONS IN A NETWORK OF TOUGH, SPRINGY FIBRES



"If you want roll covering that is adjustable to all counts . . . can take ordinary hard ends without leaving grooves . . . and stays kind to the yarn for up to 18 months and more in front line positions . . . then Spinna Calf—the most generally used calfskin—is your best choice."

LAWRENCE **CHROME** LEATHERS

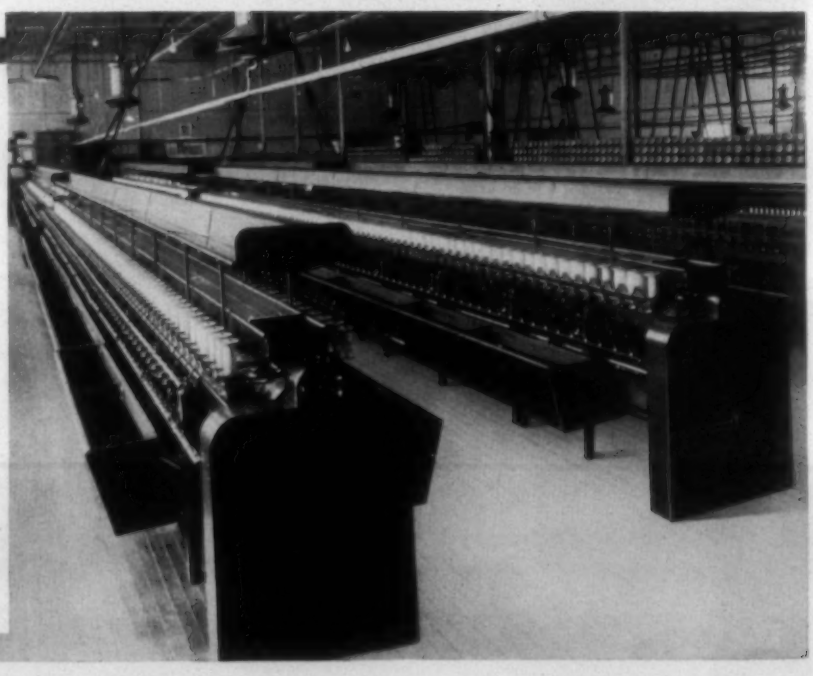
1st Choice for Aprons

A. C. LAWRENCE LEATHER COMPANY

PEABODY, MASS. GREENVILLE, S. C.

OVERSEAS ATTACK demands top national production. For peak maintenance in *TEXTILE* mills use . . .

Official U. S. Navy Photograph



.....SINCLAIR LUBRICANTS. Lily White Oils keep spindle operation cool, quiet, and drag-free at all speeds. No-Drip Lubricants resist throw even in worn comb boxes. Sinclair Bearing Grease AF for plain bearings is *neutral* in color and *water* soluble. Sinclair also offers quality *Knitting Machinery* oils.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.

SINCLAIR TEXTILE LUBRICANTS

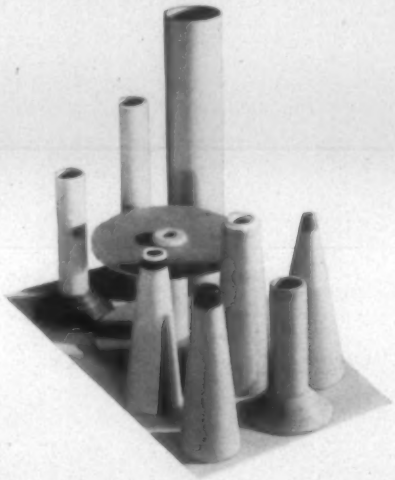
FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY (INC.), 630 FIFTH AVENUE, NEW YORK CITY

TEXTILE BULLETIN

MEMBER AUDIT BUREAU OF CIRCULATIONS

Vol. 64 August 15, 1943 No. 12

Sonoco Products GO TO WAR



IT'S a far cry from textiles to tooth powder, but this war is finding many unusual and strange adaptations of products developed basically for peacetime needs. In fact, American ingenuity is operating at an all-time high, in providing materials for war, substitutes to relieve critical shortages, and helping maintain a satisfactory civilian economy.

Sonoco Products Co. of Hartsville, S. C., is a remarkable example of peacetime manufacturing facilities adapted to war needs.

Sonoco has a world-wide reputation for the manufacture of textile paper carriers, principally the paper cone used in packaging yarns for shipping or creeling. Sonoco cones are used, or were used, in every country where textiles are made.

You will remember reading about the remarkable aircraft parachute flares dropped by our fliers in one of the night sea battles in the Solomons, and how they lighted up the sea like day, for miles—spotting the Jap ships for our gunners, who did the rest . . . Sonoco makes four special tubes for this intricate device—one of them a split-tube that holds the parachute until it leaves the bomb-like container pictured here, and then halves itself to allow the parachute to open. This is the famous magnesium flare of a million candlepower, with an unbrella reflector that throws the light downward.

Other Sonoco tubes are used for Army parachute distress flares, signal flares and colored smoke signals.

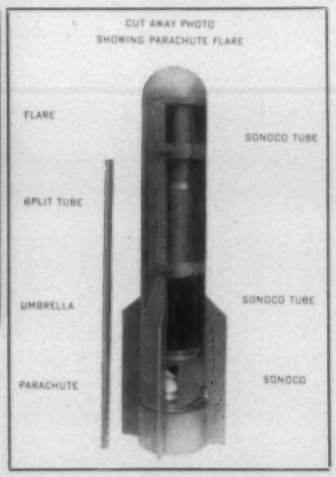
Only recently adopted by the Army Transport Service, the yellow smoke-bomb is used as a distress signal for lifeboats and life rafts. It might be used also in the near future on all large transports and transport planes. This smoke-bomb might have saved Captain Rickenbacker's party many days of drifting in the South Pacific. The smoke-bomb produces a thick cloud of beautifully colored yellow smoke that can be seen for a distance of 40 to 50 miles. The tube containing the smoke chemical is produced by Sonoco.

The charge in a parachute distress flare is loaded into a paper tube made by Sonoco. This signal was approved recently by the Army Transport Service for use on all lifeboats and life rafts taking our troops to foreign lands. Twelve signals and a pistol with which to project them are loaded into a water-tight canister and lashed to the boat or raft so as to be available in an emergency. Experience has shown that it is absolutely essential for the paper to be uniform in all respects, and that the tube be made as nearly perfect as possible. If a misfortune occurs at sea, the lives of many men depend upon this flare working perfectly.

Still another signal in which Sonoco paper tubes are used is one affixed to the bridge of all submarines. It is used to answer an aircraft recognition signal. The deck officer ignites it by pulling a lanyard and it burns with a colored illumination for a period in excess of two minutes, or time enough to give the submarine plenty of opportunity to crash dive if necessary.

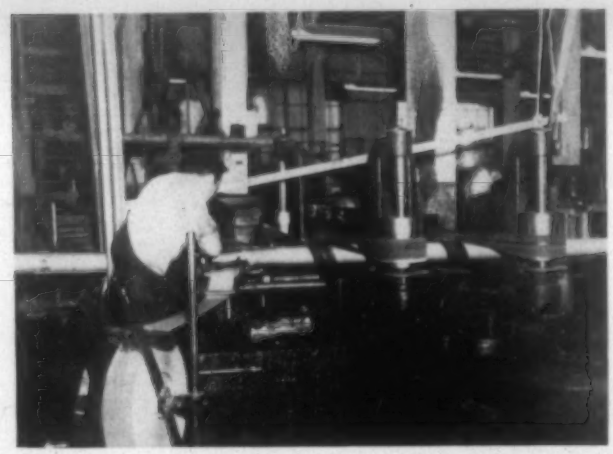
Tubes for signal flares purpose must be made perfectly correct in all details. This particular Sonoco tube carries a small parachute. The parachute itself is made of paper. It

Do the containers above look familiar? They ought to, for they are Sonoco textile cones transferred to a place on the bathroom shelf. A little more warlike is the parachute distress flare, shown in detail at right.



is folded within the tube and placed within an aluminum casing. The aluminum casing is charged and shot from the deck of a ship or from behind the lines with a mortar gun. As this parachute flare reaches its given height a time charge goes off, pushing the paper tube to the extremity of the casing, and thus the flare candle is ignited. The parachute carries the flare in the air for a burning time of approximately two minutes. These are what are known as signal flares in the Navy and can be used as land flares in the Army as well.

While Sonoco Products Co. is primarily a manufacturer of paper and paper products—to equip and maintain its six



Above, making spiral tubing of large diameter. One strip of board is fed so that it touches the surface of a stationary mandrel. All other strips, which make up the board laminations, are fed at an angle from the opposite side of the mandrel and enter a glue and wax bath before being wound. The board tube is turned on the mandrel by means of belts.

widely separated manufacturing plants it has developed its own machine tool plant at Hartsville, one of the largest and finest in the South. In this plant the company today is machining metal parts for 37mm and 40mm guns. Some of these parts have been traced through Lend-Lease to Russia, and on to Stalingrad. It is a matter of record, the part 37mm and 40mm guns played in this historic battle. Sonoco is particularly proud of the fact that some of its own products contributed to that heroic stand—the turning point of the war in Europe.

In the textile field the indirect war needs for Sonoco products run into dozens of items: tubes for rain wear cloth, cones for Army and Navy sewing thread, spools for parachute nylon thread, starter cartridge tubes, cones for yarns to weave all types of Army and Navy fabrics, plus tubes to wind the rolls of finished materials.

The manufacture of Sonoco paper cones and cylinders begins in the board mills of the company. Waste paper is the raw material. It is processed in the same manner as new pulp. The pulp is sent to the Sonoco board mill with its beaters, jordans and paperboard machines. There are five of the latter. Two are 84 inches, two 96 inches and one is 112 inches wide. The board—0.009 and 0.03 inch thick—is cut into the required widths before it is wound on spools. The board may be the usual smooth-surfaced type or it may be embossed between rolls at the end of the paper machine. To make cones, a spool with the board wound on it is fed to a machine which immerses the board in glue. The board is then passed under a die which cuts a pattern for a cone. The pattern, shown roughly at the left, is fed to a spinning cone-shaped metal form which is fitted with a gripping device. This holds one end of the pattern and winds up the board to the shape of the form. There are three to five plies of board on a cone. The products of the cone-making machines are tossed onto conveyor belts at a rate as high as 2,000 per hour per machine. Succeeding steps include baking the cones to dry the glue, rounding the tip of the cone by means of a pressure die and smoothing—burnishing—the tip. The smooth furface is obtained in much the same manner as by ironing. The tips of such cones are generally colored so that the yarns wound on them may be identified in textile mills. Cones are colored by placing them in racks and dipping them into a lacquer bath.

The Velvet type of Sonoco cone is made by sanding an ordinary smooth-surfaced cone with the usual belt-type sander. Cones designed for winding yarns to be package-dyed are perforated. Cones with rough or embossed surfaces are used for cotton; the velvet and other smooth types for silk, rayon and high-grade cotton yarn.

Treating Cones and Tubes

When cones or tubes are designed to be used for package-dyed yarn, they not only are perforated but they are also treated. This consists of immersing them in Sonolite, a liquid containing a synthetic resin. A vessel containing the Sonolite is loaded with cones or tubes. A vacuum is created in the vessel for 30 minutes while the paperboard is impregnated. The cones or tubes are then removed and dried in an oven. This treatment is necessary because the cones and tubes with their yarns will be subjected to hot dye for as long as five hours. The dye makes its way to yarns close to the cone or tube by passing through the holes.

Sonoco tubes are made with two to 15 laminations and in diameters ranging from 0.25 to 12 inches. The smaller

In making cones, a metal forming cone revolving in a machine grips one end of the glue-coated paper, forms it into a cone and ejects it into a hopper which feeds a conveyor. This carries it to an oven in which the glue is dried.

sizes—under one inch—are usually all straight wound, while larger sizes are spiral wound. Straight winding is done by feeding a square or oblong-shaped piece of glue-coated paperboard to a revolving mandrel. This grips the starting edge and winds up the board.

Spiral tubing is made by feeding the desired number of

This article was prepared with the co-operation of Sonoco Products Co. and the publishers of Esso Oilways, from which part of the material was borrowed.

RAYON REPORTS

Presented Monthly by American Viscose Corporation, New York, N. Y. AUGUST, 1943

RAYON HELPS STRENGTHEN LATIN-AMERICAN TIES

To help wage our economic warfare with the Axis and to promote hemispheric solidarity, the State Department last year issued an order directing the United States rayon industry to set aside a part of its production for export to Latin-American countries.

To comply with this Government request, the American Viscose Corporation early in 1942 organized an Export Department in its New York office.

Today, the textile mills of our Good Neighbors are being supplied with all the rayon we can ship. Hundreds of thousands of pounds are being shipped each month to Latin-American mills. They are receiving yarn and fiber on the same basis as our domestic customers.

"E" AWARD FOR MARCUS HOOK

On June 21 letters sent to all employees of the American Viscose plant at Marcus Hook announced that their all-out effort had won the coveted Army-Navy "E" for outstanding performance on war work.

Presentation ceremonies took place on July 14th.

This is the first Army-Navy "E" Award to be made to a United States rayon producing plant. It's also significant that the Marcus Hook plant was the first successful rayon plant installed in this country.

A pioneer is "first" again!

BOOK FOR BEST SELLERS

"Your Guide to Rayon," a new book designed to furnish useful facts on rayon for retail salespeople, has just been published by the American Viscose Corporation.

In addition to basic facts on rayon, this book contains the full story on CROWN Tested, especially interpreted for retail consumption.

It will be distributed widely to retail training directors, store management, and—as far as possible—to direct sales personnel.

FAMILY NOTES

A.V.C. is currently allowing a maximum of 40 hours per week per plant in payment of the services of employees serving on local draft boards and/or rationing boards. This is to be paid to employees for lost time while carrying out their duties in connection with the war effort. Under this plan, a single employee can serve the full 40 hours, or two or more employees can serve part time, and be recompensed for this wartime work.

Employees of the American Viscose Corporation's seven rayon-producing plants are currently subscribing for the purchase of war bonds at the rate of $2,332,000 per year. This is nearly double the rate of last year.

NAME CHANGE!

American Viscose Corporation announces that the name of its Sales Development Department at Marcus Hook, Pa., has been changed to "Textile Research Department."

This department will continue to aid the textile industry in the improvement and development of better fabrics.

The change in name has been made to clarify the purposes and nature of the department's activities.

CARPET INDUSTRY'S DEMAND FOR "TUFTON" GROWING

The acceptance of the new type of rayon staple fiber, "Tufton," presages a bright future for this American Viscose development and great demand for this fiber by the carpet industry.

To some extent, this is also true of rayon in general. The uses for rayon today are so great that all demands cannot be met.

New and interesting uses for rayon are constantly being developed as a result of continuing research. Which means that considerably more rayon will be needed in the future, since leading manufacturers have expressed their intention of continuing the use of rayon in their products after the war.

Until normal times permit the installation of additional plant facilities, the rayon industry will exert itself to the utmost to provide the fairest and most equitable distribution possible among the different groups of interested users throughout the United States.

NEW BULLETIN ON DYEING RAYONS

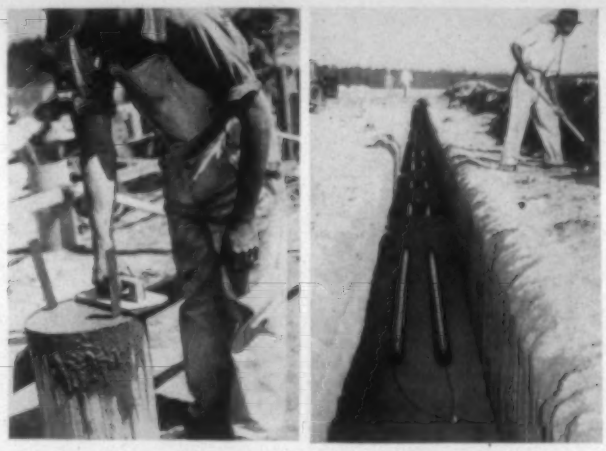
A new bulletin by James A. Hopwood of the Textile Research Department, "Dyeing Procedures for Rayon Woven Goods," has just been released. In this article, Mr. Hopwood discusses the scouring of viscose fabrics spun and filament, methods of color selection, high tenacity yarns, development in staple fiber, and "Vinyon."**

For a copy of this Bulletin, simply address your request to American Viscose Corporation, 350 Fifth Avenue, New York, New York.

**T. M.—C. & C. C. C.

strips of paperboard to a stationary mandrel. The surface of the strip which touches the mandrel is dry; all other strips are glue-coated. To accomplish this, the dry strip is fed from one side and all others from the opposite side. To form the tube, belts are used, as shown, to turn the glued plies upon the mandrel. The mandrel surface must be smooth to allow the board to slip easily. The tubing is cut to length at the end of the mandrel.

In another entirely separate field, yet equally important to the war effort, Sonoco has developed a concrete pier-form, now widely used by cantonment contractors and for other Federal construction. This pier-form, known as Sono-



One important paperboard product introduced by Sonoco is Sonotube, being used at left. Taking the place of wooden concrete forms, Sonotubes may be left in place or stripped off. Sonoducts, at right, are paperboard conduits which have been impregnated with asphalt to make them waterproof. The straight sections shown may be joined by straight or angle fittings, some of which are made of paper.

tube, has saved thousands of man hours, lumber, time and money in speeding war construction projects. It consists of a laminated and especially treated fiber tube, made to desired diameter. These tubes are cut by hand saws, on the job, to proper lengths for the height of the pier needed. After bracing the form, concrete is poured. When the concrete sets, the form can be stripped off or left to slough off. The pier is finished and ready in a matter of hours for the placing of floor sills of the building. A recent Sonoco product is Sonosleeve. These expansion rod sleeves are now used in the expansion joints of many concrete highways and airport runways. The waterproof paperboard sleeves are slipped over rods extending horizontally from one section of concrete. The next section of concrete is poured around and over the sleeves. When the concrete sections expand and contract, the rods can slide back and forth in the sleeves and in this way prevent road cracking.

Another Sonoco product in the construction field is sectional conduit, made as a heavy laminated paper tube, impregnated for underground use—saving metal conduit—and now being used in Government construction. It is called Sonoduct.

Containers

In addition to saving needed war materials, Sonoco has come to the aid of the home front with the development of a new type all-paper container, currently substituted for metal, for a prominent manufacturer of tooth and face powder. This already famous cone package is exclusively Sonoco, and will doubtless be recognized by textile men wherever used. The Colgate tooth powder package shown on page 9 recently received the only award given in its field, in the 1942 All-American Package Competition. Admittedly a substitute package today, it will with the release of plastics and other materials after the war be perfected as a permanent container.

Most of the Sonoco products mentioned above have been a long time "cooking" in the laboratory. This department, inaugurated early in Sonoco history, has not only kept the company abreast of developments in textile manufacturing, but its studies have opened the outlets for many other paper products. Because of it, Sonoco textile paper carriers are better made, in greater quantity, at lower costs, than would have been possible otherwise.

While most products are of standard specifications, Sonoco has been called upon to produce dozens of special sizes and constructions and of custom treatments to meet the demands of our scientifically equipped armed forces in the four quarters of the globe. It is estimated that a thousand items for war use depend on Sonoco products to some extent. In all of these, Sonoco products are saving both money and critical materials.

A remarkable fact about this unusual company is that it achieved its greatest growth and expansion during the so-called depression '30's. Realizing its importance as a supplier to the textile industry, and with a view to providing for adequate and dependable production for a long time in the future, Sonoco in 1937 more than doubled its capacity beyond current needs. Three years later this foresighted expansion was the salvation of users of textile paper carriers. Since that time, while demands have steadily mounted, Sonoco has overcome all obstacles that have plagued production in every line of manufacturing, and met every demand of the textile industry, Government and civilian needs.

In 1930 there were three plants, now there are six. Besides the home plant, units are located at Rockingham, N.

Lengthy and intensive laboratory research, carried on at the home plant of Sonoco at Hartsville, S. C., has been responsible for keeping the company abreast of developments in textile manufacturing as well as opening outlets for many other paper products.

C., Garwood, N. J., Mystic Conn., Lowell, Mass., and in Canada at Brantford, Ont. Since 1930 the employed personnel has been increased from 500 to more than 2,000.

Sonoco is in this war to as great an extent as possible. In one way or another probably 90 per cent of its products from all six factories contribute to the war effort. It was

(*Continued on Page 54*)

Carl Rudisill and two young campers.

It's Something..

CARL RUDISILL'S EMPLOYEE PROGRAM

THERE was talk recently in North Carolina about drafting Carl A. Rudisill as a candidate for the state's governorship. Carl Rudisill's reply to this talk was appreciative, but it indicated that the yarn mill executive thought he had enough to do at present and didn't believe he should take on another sideline job. Besides being president and treasurer of Carlton Yarn Mills, Inc., he is treasurer of Howell Mfg. Co. as well as vice-president and treasurer of Nuway Spinning Co., Inc., both of which are also located at Cherryville. This industrialist is an educator as well, being a trustee and patron father of Lenoir-Rhyne College at Hickory, N. C.

That sounds like enough to keep any man busy. But in the summer, when most persons decide to take it easy for a few months, you will find Carl Rudisill very actively operating Camp Rudisill near Cherryville for the benefit of children of employees at the three spinning mills.

It Began as a Farm

Several years ago, Mr. Rudisill acquired an extensive acreage two miles from Cherryville, part excellent grazing land and part timber. Beginning with the purchase of white-faced Hereford cattle, he has added Palestine goats, hogs and horses; also, an apiary yielding a large quantity of honey. He then decided to build a camp for employees.

Ideally situated in the heart of Rudisill Farm where large oaks furnish shade and a pretty brook flows is the camp, which consists of many newly-constructed wood-and-screen structures painted white. Center of the camp is the administration building, which houses mess hall and kitchen; and adjacent to this is the "Jitterbug," the recreation pavilion, draped with American flags and red, white and blue bunting, and equipped with piano, victrola and game-tables. These buildings face the camp's swimming pool, 40 by 160 feet in size, and filled with well water which constantly passes through a filter plant. Grouped around the sides of the pool in the shade of the great oaks are chairs and benches for the comfort of the young campers. Overlooking it is a stone-encircled terrace planted with many colored summer flowers. On the slopes leading down to the pool and central buildings are six large sleeping cabins, capable of quartering 80 young campers at a time, and a cabin housing the first aid station and annex under the supervision of Miss Katherine Dellinger, community nurse of the Rudisill mills at Cherryville.

The children of the mill employees attend Camp Rudisill in three age groups, for a period of one week per group. When camp opened July 19 the four to ten-year-old group came first, followed by the ten to seventeen-year group. At the close of the camp season, the adult members of the Rudisill mills' community are given free use of the camp and its facilities and come in parties for picnics, with an outdoor kitchen at their disposal.

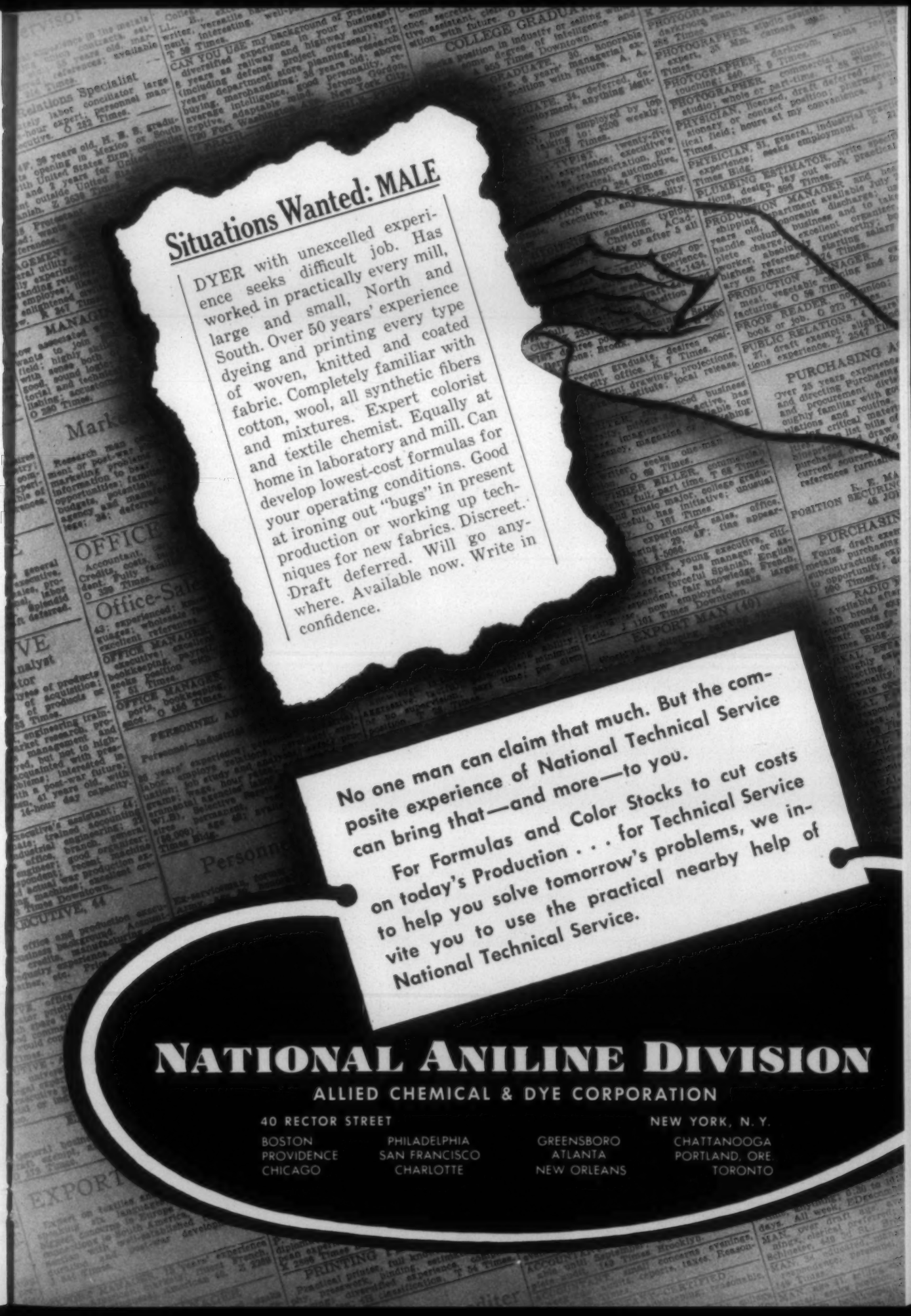
Swimming and Eating

From the bugle notes sounding reveille at 7:30 a. m. to supper-call at 6:30 p. m., the long summer days are filled with entertainment, with morning and afternoon swim periods in the pool being most popular. General supervisor of all activities is Mrs. Victor Stroup, director of social recreation in the Cherryville community. She is assisted by a staff of 11, one of them being S. M. Butler, Jr., son of the Carlton Mill secretary and assistant treasurer.

Mr. Rudisill is a frequent visitor to the camp, watching the sports with interest and mingling with the children, many of whom he knows by name.

Well-planned and attractive meals in the long, screened mess hall with its flower-decorated tables are supplemented

The swimming pool at Camp Rudisill is one of the most popular scenes of activity.


Situations Wanted: MALE
DYER with unexcelled experience seeks difficult job. Has worked in practically every mill, large and small, North and South. Over 50 years' experience dyeing and printing every type of woven, knitted and coated fabric. Completely familiar with cotton, wool, all synthetic fibers and mixtures. Expert colorist and textile chemist. Equally at home in laboratory and mill. Can develop lowest-cost formulas for your operating conditions. Good at ironing out "bugs" in present production or working up techniques for new fabrics. Discreet. Draft deferred. Will go anywhere. Available now. Write in confidence.
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CHATTANOOGA
PORTLAND, ORE.
TORONTO

by a bountiful supply of sweet milk, supplied by Mr. Rudisill; with an average of 40 quarts per meal being consumed by the boys and girls privileged to attend Camp Rudisill.

Their stay at camp over, the groups of children are re-

Carl Rudisill, standing at left on the pool's edge, watches a group of swimmers, the sons and daughters of mill employees.

turned to their homes in the company-owned and operated buses which brought them, rested and benefited by their outing at this ideal haven built and maintained for them.

A pioneer in the field of community work among mill employees in this section, Mr. Rudisill has spared neither labor nor expense in providing not only better living and working conditions for the hundreds of employees of his mills but also has provided excellent facilities for a fuller and more enjoyable social life in the communities where the Rudisill mills are located. Animated by the principles of good-will and co-operation on the parts of employers and employees alike, Mr. Rudisill, assisted by S. M. Butler, works always toward this goal. Hence, the mill community of Cherryville, with its many pretty, well-kept homes where the textile workers live, is a quiet and pleasant place in which to dwell.

The hub and center of the community work, under the

A blessing is said before each meal at the camp.

direction of Mrs. Victor Stroup, is a spacious and elaborate building erected by Mr. Rudisill a number of years ago, the Carlton clubhouse. Of concrete block construction with unique brick trim, it is set in a large area on the outskirts of the town of Cherryville, in artistically landscaped surroundings. The smooth green lawn is terraced down to the street and ornamented with cedars and other evergreens, and beds of flowers. Adjacent to the clubhouse are tennis, shuffleboard and badminton courts; also a park for children complete with swings, slides and sand piles.

The visitor to the clubhouse, crossing the broad porch which surrounds it, enters the big assembly hall which is constructed and equipped as a splendid background for occasions of many kinds. The large, highly polished floor has at one end a stage with drapes of velvet, and equipped with various musical instruments. Suspended above the stage is a projection screen which may be dropped into place for the showing of movies. Scattered about the room are many chairs and sofas for spectators. At the opposite end of the assembly room from the stage is an honor roll carrying the names of the many men from the mills who have entered the armed services. Opening from both ends of the hall are lounges, one for men and one for women, both with large fireplaces. In these rooms are displayed cups and trophies won by the mills' various athletic teams. Aethletics are enthusiastically encouraged as an important part of the mills' community program.

The Carlton clubhouse, a large factor in providing for workers at the mills operated by Carl Rudisill.

Behind the assembly hall is the club circulating library and reading room, a pine-paneled and well-lighted space furnished with long tables on which are current magazines. The library contains many volumes, both classic and modern, and enjoys great popularity among the residents of the community.

The central hall of the clubhouse, like the library, is finished in knotty pine. From it one enters the small but perfect infirmary, with latest scientific equipment, including sterilizers; and the men's and women's showers, two large rooms with floors and walls of gleaming tile, complete with tubs and showers in both grown-up and children's sizes. These showers are always available to the community's various athletic teams and are miracles of modern convenience, with dressing room privileges.

Meals for 300

Mammoth and immaculate is the community kitchen with fresh coat of white paint, cupboards everywhere, rows upon rows of spotless crockery, a hotel-size electric refrigerator, everything, in short, that a modern kitchen can pos-

(*Continued on Page 58*)

The Most Work with the Least Effort

EASE of operation was given a great deal of consideration in the design of the Barber-Colman Automatic Spooler, with the result that operators on this machine are able to accomplish a maximum of production with a minimum of effort. For instance, consider the operation of putting up ends, shown in the picture above. Note that the bobbins are stored in convenient bins where the operator does not need to bend to reach them. The yarn clamp is at a handy height and the bobbin pocket conveniently located so that the loading is quickly accomplished in a few easy motions. Operators can thus put up a lot of ends easily and efficiently. Another point shown is the cheese truck carrying starters and full cheeses. This runs on a track and the operator simply pushes it ahead of her as she moves along the machine. These are minor features of the Automatic Spooler, but they are indicative of the detailed thought which makes it possible for operators on Automatic Spoolers and Super-Speed Warpers to do more war work, faster and more easily.

For Example...

The following production figures show results being obtained in a well-known mill now running fine combed yarn for war goods.

Count	57s
Ring	1½"
Traverse	6¾"
Pounds per hour per Spooler,	140
Beams per Cheese	3
Yards per Beam	32,000

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • TWISTER CREELS • MOISTURE CONTENT CONTROLS

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Vat Dyeing Spun Rayon and Blends of Cotton, Wool and Acetate

By ALLISON FITZGERALD

Spun Rayon-Wool Fabrics—Part Nine of a Series on Wartime Dyeing

THE desizing and boil off operation for spun rayon-wool fabrics may be carried out by using approximately the same formulae as run on spun rayon-acetate goods, adjusting for the light and heavyweight qualities.

It has been found best from a practical standpoint to increase the percentage of proteolyctic type of desizing agent when desizing goods containing wool, so as to be certain that the sizing agents are thoroughly solubilized and easy to remove in the boil off operation. Two 200-gallon desizing mixes are listed below.

Formula Number One:

40 to 70 pounds desizing compound
4 to 8 pounds wetting agent

(This desizing compound must possess solubilizing action on both amolyctic and proteolyctic sizing compounds.)

Formula Number Two:

25 to 40 pounds desizing compound (amylolyctic)
15 to 30 pounds desizing compound (proteolyctic)
4 to 8 pounds wetting agent

Give the greige goods one end on the padder at 140° F. or recommended temperature given by maker of desizing compounds. Run the padded goods direct to shell and batch ready for standing three to six hours while the sizing compounds solubilize sufficiently to be run on the boil off operation.

The padded roll must be kept moist during this solubilizing period, as any partial drying out will give an uneven removal of the sizing compounds and in some instances a transference of the sizing compound partially from the rayon to the adjacent wool fiber.

Either complaint on poorly desized goods will cause trouble in the padding of the vat colors and subsequent reduction and dyeing operation on the jigg.

Boil Off Operation

In boiling off, enter the goods on the jigg and run through lukewarm water at 100° F., then raise water bath to 160° F. and run two to four ends to remove as great a proportion of the solubilized desizing agents as possible before dropping bath and starting a fresh one with the regular boil off assistants. It is best to drop this hot water rinse, gradually adding cold water, in bringing up a fresh bath.

Boil off bath (75 gallons):

6 quarts fatty alcohol or synthetic detergent
1 quart ammonia

Raise bath to 130° F. and run two ends. Add one quart ammonia, raise to 160° F., and run four ends. It is best to run goods containing wool at lower temperature than the 180° F. usually run on spun rayon-acetate qualities and give two extra ends before giving a running cold wash and shelling up goods preparatory to a peroxide bleach.

Only the peroxide bleach may be run on this construction, and it is best to use the same bath but reduce the bleaching temperature to 160° F. and give the goods an additional number of ends instead of running it at 180° F. for fewer ends. This 75-gallon peroxide bleach formula gives very good results:

6-8 quarts hydrogen peroxide, 100 volume
2 pints ammonia

Raise bath to 140° F. and give four ends. Add one pint ammonia and give four ends at 160° F. Drop and give running cold wash, then three ends at 100° F. and run onto shell ready for drying.

Drying

Drying on a loop dryer and then framing to width gives fairly satisfactory job for padding of vat colors. To obtain the best quality vat dyed results, it is best to dry slowly on an enclosed frame. If a 90-foot frame is available, use the longer one in preference to the shorter 60-foot frame,

RAYON AND OTHER FIBERS

Rayon's best future lies in its mixture with other textile fibers, according to a statement made last month by Samuel Courtland, chairman of the pioneer British rayon firm which bears his name, and president of the British Rayon Federation. He also predicted that later developments will feature more mixtures of one type of rayon with another. The field for mixtures has "hardly been more than scratched as yet," he stated.

The dyeing of rayons and mixtures of rayon with other fibers is being dealt with by Allison Fitzgerald in his series of articles no wartime dyeing. The ninth installment of this series begins on this page of the current issue, and will be taken up in following issues as well.

which may not give fully dried goods, shelled ready for padding with vat colors. Be certain to check the dried cloth entering on vat color pad operation; it should be cold and dry.

Notes On Bleaching Operation

In a majority of piece goods dyeing and finishing plants the officials and operatives speak of a liquid sodium hypochlorite solution as the "Chemick" liquor to differentiate from the cylinders of chlorine gas which are used to make up this sodium hypochlorite solution.

As to the desirable methods used for the preparation of sodium hypochlorite solutions in various practical strengths for plant use, the writer suggests study of the many valuable bulletins available from makers of chlorine gas. (Two of the leading makers of chlorine gas are Mathieson Alkali Works, 60 East 42nd Street, New York City, and Solvay Sales Corp., 40 Rector Street, New York City.)

In the preparation of these spun rayon cotton and acetate rayon goods it is very necessary to have a well scoured and uniformly bleached bottomed goods for dyeing the vat colors by the padding and jigging method. The thorough scouring of goods being bleached by the acid chlorine bleaching procedure is essential if the goods are to secure as uniform a bleached cotton as run by the alkaline buffered chlorine bleach method or the regular hydrogen peroxide bleach. These operations are carried out at high bleaching temperatures, whereas the acid chlorine procedure is run cold.

It is the best plant policy for the chemist or dyer to determine what is the most desirable amount of available chlorine to use for both the acid and alkaline methods and then to work out, from standard procedures, quick laboratory methods to check amount of available chlorine in each prepared lot of concentrated plant sodium hypochlorite solution.

These technical instructions should be kept for use of dyers and laboratory operatives only and instructions as to actual amounts of these plant solutions be given the machine operatives.

From plant runs it should be pre-determined, before starting up full size plant production, the most desirable acid and alkaline pH readings where the best results are obtained. Then see that these pH values are adhered to closely on all plant runs. Check pH readings at the start and completion of each bleaching operation by sampling the solution, marking same and placing in airtight bottle ready for immediate testing. It may not be necessary to make these tests for pH and available chlorine on every machine run, but it is the best policy to check at least 50 per cent of the machine operations so as to keep the operatives from becoming careless. Careful testing of bleach baths will keep machine operatives on their toes, as the source of poor quality work can be located quickly when you find a machine operative careless in preparation of bleach bath. This carelessness means unevenly bleached bottomed goods, spotty dyeings due to lack of thoroughly removing the chlorine in the anti-chlorine bath, and many other complaints that a dyer has before him on processing this high quality goods with vat colors.

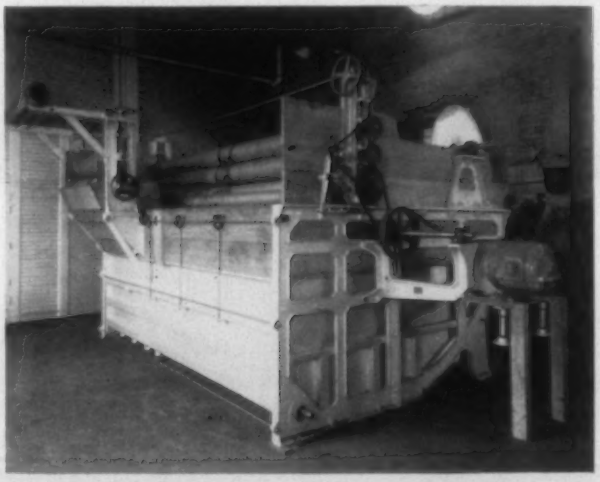
As stated in the chlorine bleaching formulae, the acid bleaching operation is carried out cold, while the alkaline method is run hot. The explanation of the differences in these two methods is that the acetic acid liberates the active chlorine slowly in a cold bath, thus permitting it to bleach the cotton, spun viscose rayon and acetate rayon uniformly. If it was heated there would be too violent a liberation of chlorine and nascent oxygen, thus causing overbleaching. The results would be tendered goods technically known as oxycellulose and hydocellulose formation throughout the goods.

Further Anti-Chloring

The acetic acid actually acts as an anti-chloring agent, but it is not practical or economical to use such an excess of acetic to liberate all of the available chlorine during the bleaching operation. For this reason there is a subsequent process known as anti-chloring or souring when the remaining traces of chlorine are removed from the goods. This is essential for goods bleached by either of the chlorine bleaching methods as any chlorine remaining on the goods will age and give the goods a yellowish tinge and definitely affect the vat dyed shades, as well as producing an obnoxious odor. A pH of 4.5 to 5.0 is desirable for the acid chlorine bleaching bath, and it is best not to go over 10 to 10.4 pH on the alkaline chlorine bleach bath..

One practical working point regarding the alkaline bath is that through the use of various mild alkalis in the preparation of the sodium hypochlorite, the chlorine and nascent oxygen may be held buffered in the bath until heated. By heating the bleach bath to 160-180° F., this bleaching action is carried out through a gradual break-up of the alkaline buffering agents and liberation of the active chlorine and nascent oxygen which carry out the bleaching of the vegetable fibers (cotton, acetate and viscose rayon).

The most widely used anti-chloring agent is muriatic acid (hydrochloric). Sulfuric acid may be used, but it is too dangerous to control, as it tenders these fibers too



Shown above is a stainless steel slack washer which was installed recently for West Point Mfg. Co. by Riggs & Lombard, Inc. Due to the great potentialities of vat dyeing spun rayon fabrics this machine can prove a valuable addition in future large-scale finishing off of vat dyed goods.

quickly. Sodium hydrosulfite, acetic and formic acids, sodium bisulfite and sodium thiosulfate may be used safely.

The hydrogen peroxide bleaching operation may be carried out and usually will give more uniform results than either of the chlorine bleaching operations, but is considerably more expensive in chemical cost. It is more desirable for the acetate and viscose rayon goods due to its

(Continued on Page 52)

PRACTICAL TEXTILE DESIGNING

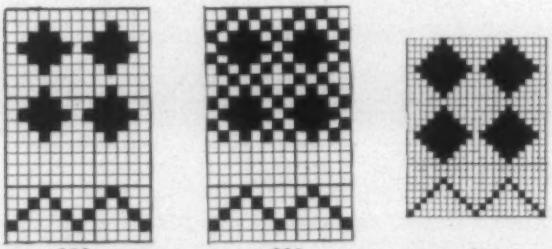
By THOMAS NELSON
Dean of the Textile School, North Carolina State College, Raleigh

PART SIXTEEN

Honeycomb weaves, sometimes known as waffle weaves, are the author's topic in this issue's installment. Dean Nelson will deal with "mock" or "imitation" leno in the Sept. 1, number.

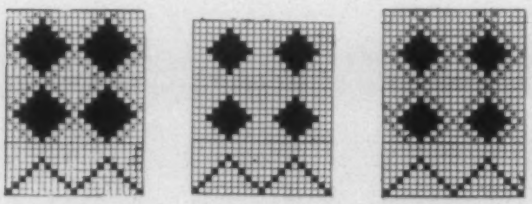
THE peculiar construction of honeycomb weaves forms squares or diamonds in the cloth resembling the cells of a real honeycomb. These weaves are made by floating both the warp and the filling, forming ridges, with center of the square being lower than the ridges. The back of the cloth is almost identically the same as the face of the cloth. The ridges are formed by gradually decreasing the floats of warp and filling threads from the ridges. A point draw is generally used, which reduces the number of harness shafts almost one-half.

To construct these weaves, first put down the drawing-in draft. The center thread in back harness will form the ridge on both sides of the square. The floats of threads on each side of the center threads are gradually reduced towards the center of the square. This is illustrated at Fig. 232. To complete the design, the ridge for the filling will have to be made, for it will be noticed that on the sixth pick the filling will float over all the warp threads



232 233 234

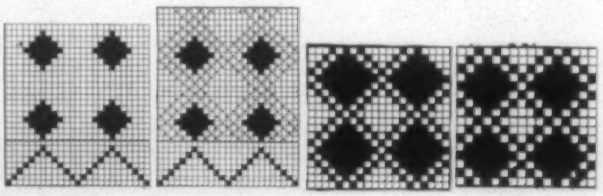
Fig. 233 illustrates the method of overcoming this. The ridge formed by warp is made with a float of five, but the ridge made by filling is made by a float of three. The pattern is complete on six threads and six picks.



235 236 237

Fig. 234 illustrates a larger honeycomb weave, which more clearly shows the principle of construction. The center thread forming the ridge has a float of nine, and the floats are gradually reduced as in previous examples. Fig. 235 illustrates the complete design. The ridge formed by filling is made by a float of seven and is indicated by the dots. The pattern is complete on ten threads and ten picks.

Another class of these weaves is made by having warp floats for ridges farther apart and running one or two lines of twills between the warp floats. This will make a firmer fabric. The warp floats are made in exactly the same manner as the preceding examples, the only change being that for one line of twills the warp floats for ridges are divided by three empty squares, and for two lines of twills by five empty squares.



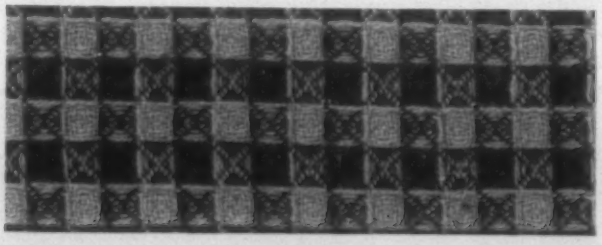
238 239 241 242

Fig. 236 illustrates the warp floats for one line of twills running between the floats. Fig. 237 illustrates the complete design with a line of twill inserted as shown by dots. The pattern is complete on ten threads and ten picks.

Fig. 238 illustrates the warp float for two lines of twill running between the floats. Fig. 239 illustrates the complete design, with the lines indicated by dots.

Fabrics Made From Honeycomb Weaves

When made from fine yarns these weaves are used for dress goods, blouses, skirts, children's dresses, etc. The heavier fabrics are usually made from ply yarns and are



240-A

used for draperies, suitings, coatings, quilts, etc. These weaves are also used in combination with other weaves to produce fancy effects in fabrics.

Fig. 240-A illustrates a coating fabric made from two-ply 20 yarn in warp and filling, the ends and picks ar-

(*Continued on Page 46*)

ONYX

FOR BETTER LOOKING—BETTER WEARING FABRICS

Official U. S. Navy Photograph

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The Significance of Cotton Textiles To the Armed Forces

By HUGH M. COMER

I HAVE BEEN invited to use as the subject of my talk, "The Significance of Cotton Textiles to the Armed Forces." In hunting for a definition of significance, in this instance, I choose to use the word "responsibility." And so for my subject I have the title, "The Responsibility of Cotton Textiles to the Armed Forces." The definition of responsibility, to me, means to see your duty and to do it. We are raised on the slogan: "Every man is expected to do his duty." And this duty has been to produce the pounds. We are never to lose sight of the necessity for production. We have attained a production of somewhat over 100 per cent over 1936-37 and we are maintaining this high level of production week after week.

I am glad to be in a basic industry even though it is an industry of feasts and famines. And I am proud now since I have been preparing to make this talk to find a list of the

How cotton fights for freedom was the theme of the Cotton Research Congress held recently at Dallas, Tex. Shown above in front of an exhibit are, left to right, D. T. Killough, chairman of exhibits; Major Burris C. Jackson, chairman of the State-wide (Texas) Cotton Committee, sponsor of the congress; A. B. Conner, director of the Texas Agricultural Experimental Station; D. T. O. Walton, president of Texas A. & M. College; and John T. Wigington, director of the research department of the Cotton-Textile Institute at Clemson, S. C.

thousands of articles, articles that we never heard of before, that our industry is being called on to produce.

Now, in the beginning, I want to call your attention to the fact that necessary cotton mill machinery was in place at the beginning of this war; that so far as I know there has been only a hat full of new spinning and new looms added to our industry. The industry has not bothered Jesse Jones for money for new equipment, neither has it competed in the money market with war bonds for civilian money with which to buy new looms and new spindles. After the war is over and the boys come home, and we change our looms from balloon cloth and cannon covers back to skirts, and shirts and socks, this machinery will still be in place, but it won't be as busy humming along as it is now. The crank shafts will be a little worn and the gears threadbare; and the shuttles a little splintery; the motors and bearings a little sticky and smelly. So I hope you won't consider us out of place when we ask the boys in the Government who are looking after the questions of accelerated depreciation and renegotiation to think about this important phase of our cycle—"After the ball is over and after the dance is done."

Our industry is trying to work safely. Our accident frequency ratio compares favorably with the lowest ratios in other industries.

Our people have come to work. The records of absenteeism in the textile industry industry have been remarkably low.

Labor Situation Good

There have been precious few labor disputes and practically no work stoppages at all because of the lack of ability of the management and employee to adjust their differences. In other words, the mills are doing their best to maintain fair labor standards in their several organizations. You will find in the industry all sorts of plans with which to bring to the fore employee grievances and employee problems. You will find, I think, strict compliance, not only with the letter but with the spirit, in both the Fair Labor Standards Act and the Walsh-Healey Act. Cotton textile wages have been materially increased. The industry has been officially declared essential and the War Manpower Commission has stabilized unemployment.

You will find in the industry intensive learner programs whereby new employees, coming into the plant, can be properly instructed in their duties. Also any number of foremanship schools; schools teaching the key men how to get along with their fellow workers. Hundreds of women have taken over men's jobs. The proportion of women to men in work has risen from 40-60 to approximately 60-40.

The plants are doing their best to maintain health standards. You will find in their lunch wagons nutritional foods.

(*Continued on Page 48*)

Excerpts from address delivered by the president of the American Cotton Manufacturers Association before the Cotton Congress at Dallas, Tex.

More Orders

FOR

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FEWER ORDERS FOR REPAIR PARTS

So many knitters have found satisfaction with the advantages of Roto-Cones* over other types of "open-wind" cones that yarn mills are finding them more frequently specified. Meanwhile, mills operating Roto-Coners* appreciate the freedom they now enjoy from annoying and costly repairs. The Roto-Coner*, a winder of truly modern design, has established new "lows" for winding room maintenance and repair.

*Reg. U. S. Pat. Off.

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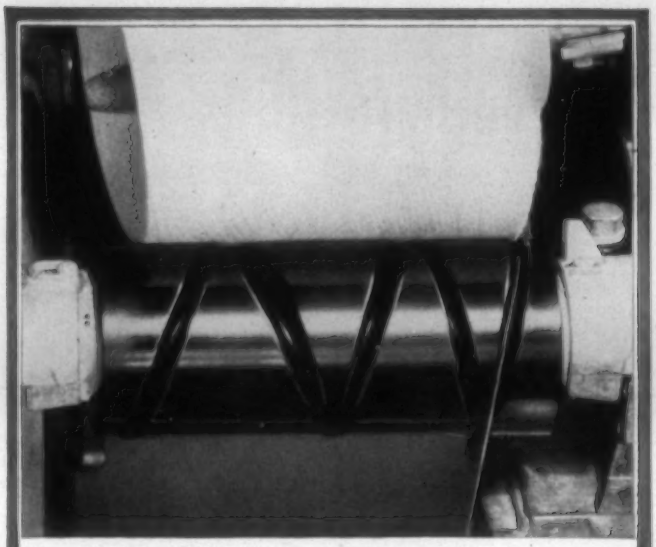


NO "ROLL CUT" OR "CHAFED YARN" COMPLAINTS

The Roto-Coner's* Rotating Traverse is a smooth, one-piece driving drum and traverse guide, revolving with the yarn, smoothing the fibres, protecting yarn quality. There is no nipping of the yarn, no chafing to cause rough yarn.

NO FAST-WEARING RECIPROCATING PARTS

The Rotating Traverse, a Universal development, is responsible for the elimination of cams and attendant reciprocating parts, thereby reducing the number of parts that are worn in service. Moreover, almost all moving parts are fully enclosed and automatically lubricated. In the winding room above, at Tolar, Hart & Holt Mills, Fayetteville, N. C., the average repair parts cost for 480 spindles over a period of years is less than 5¢ per spindle per year.

43-44-2

ROTO-CONER

LEESONA

Reg. U. S. Pat. Off.

Open-Wind Cones for Knitting

WARPING CONES • DYEING PACKAGES • PARALLEL TUBES FOR TWISTING

Southern Mills Now Have 47 "E" Pennants

OF a total of less than 2,000 Army-Navy "E" pennants which have been awarded to American industrial firms, 47 have been presented to Southern textile mills. The 1,910 firms throughout the country which have been honored for performance on war contracts represent, according to recent statistical reports, less than 2½ per cent of the eligible plants.

In comparing the record of Southern spinning, weaving, dyeing and finishing plants, note the following figures: there are some 900 of these plants in the South, some of which are ineligible for "E" awards because of not being wholly or largely on war work. Even assuming that all are eligible, the 47 "E" winners represent approximately 5½ per cent of this part of the industry, proving that plants of their type have made a much better showing in this respect than industry in general.

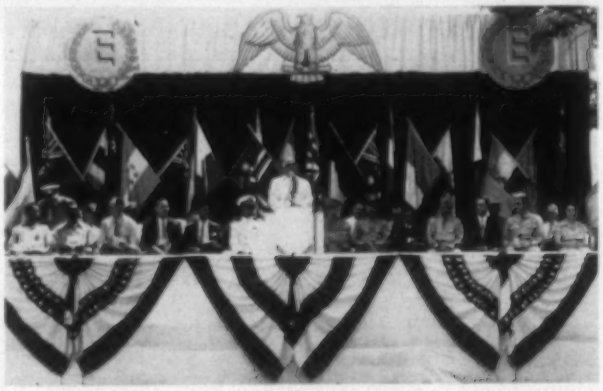
All awards are made initially for a six-month period, and following this the record of winning plants is then reviewed every six months to determine whether a service star is to be added to the flag or the award withdrawn. To obtain the star the plant must equal or exceed the record made in winning the original flag or a previous renewal star.

Holding the pennant presented to the Opelika, Ala., plant of Pepperell Mfg. Co. are left to right, Colonel John P. Baum, Mrs. Hilda Wilks, Miss Lula Carroll, J. H. Bryant and J. E. Blackmon, all employee representatives, and Donald Tansill, vice-president of the company.

Most recent plant to be honored is Union Bleachery at Greenville, S. C. The presentation ceremony has been set for Aug. 26, with Lieut. Col. Christopher C. Baldwin, Jr., officiating.

Other firms connected with the textile industry have also been recognized by various Government agencies. The R. D. Cole Mfg. Co. of Newnan, Ga., has been awarded the "M" pennant by the U. S. Maritime Commission for meritorious production. In addition to the "M" flag, the award consists of the Victory Fleet Flag and Maritime Labor Merit Badges, which are to be presented to the men and women employees of the company. The company has diverted its facilities from the standard line of processing vessels and storage tanks to manufacturing prefabricated ship parts. These parts now are being delivered to shipyards on the Atlantic and Gulf coasts.

Smith, Drum & Co., peace-time producer of dyeing machinery at Philadelphia, Pa., was awarded the Army-Navy "E" Aug. 10 for outstanding production of war materials. Sylvania Industrial Corp., Fredericksburg, Va., manufacturers of textile finishes and cellophane, has been notified that it may add a star to its "E" pennant. The Calco Chemical Division of American Cyanamid Co. has also received a star in recognition of its continued outstanding manufacture of chemicals and dyes for the armed forces.



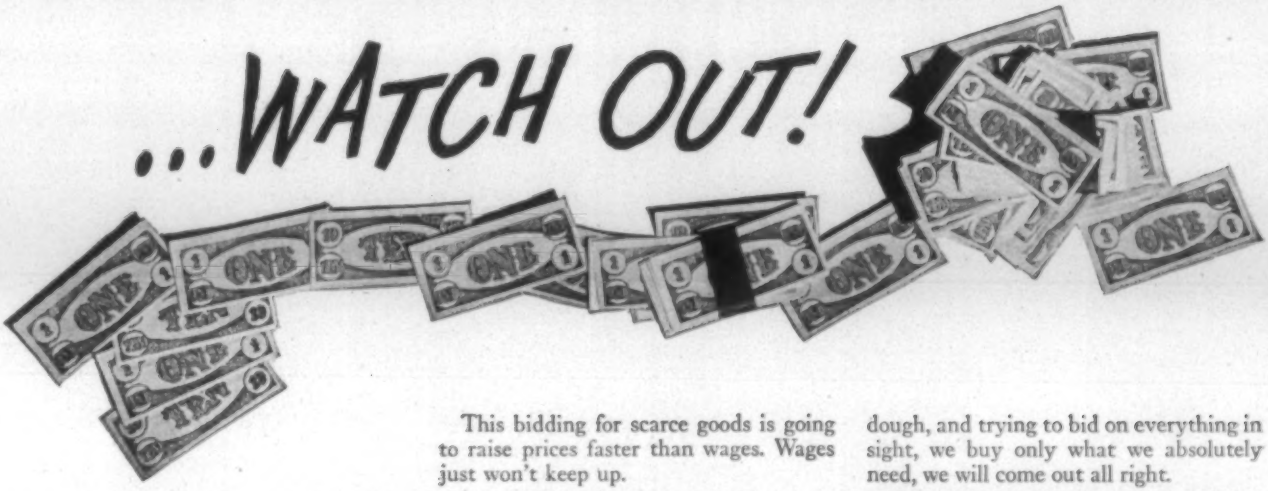
Shown above is a view of the award platform as Mayor Walter Chandler of Memphis spoke during the recent ceremonies honoring American Finishing Co.

Pictures on this page were taken at the recent presentation of "E" awards to American Finishing Co., Memphis, Tenn., and the two plants of Pepperell Mfg. Co. at Lindale, Ga., and Opelika, Ala.

At Pepperell's Lindale, Ga., plant, a special section was reserved for employees who have been connected with the company for 40 years or longer.

IF YOU'RE MAKING MORE MONEY

...WATCH OUT!



WE WANT TO WARN YOU, before you read this page, that you've got to use your head to understand it.

We also want to warn you that—if you don't bother to read it carefully enough to understand it—you may wake up after this war as poor as a church mouse.

• • •

This year Americans are going to make —minus taxes—125 billion dollars.

But this year, we civilians are not going to have 125 billion dollars' worth of goods to spend this on. We're only going to have 80 billion dollars' worth. The rest of our goods are being used to fight the war.

That leaves 45 billion dollars' worth of money burning in our jeans.

Well, we can do 2 things with this 45 billion dollars. One will make us all poor after the war. The other way will make us decently prosperous.

This way the 45 billion dollars will make us poor

If each of us should take his share of this 45 billion dollars (which averages approximately $330 per person) and hustle out to buy all he could with it—what would happen is what happens at an auction where every farmer there wants a horse that's up for sale.

If we tried to buy all we wanted, we would bid the prices of things up and up and up. Instead of paying $10 for a dress we're going to pay $15. Instead of $5 for a pair of shoes we're going to pay $8.

This bidding for scarce goods is going to raise prices faster than wages. Wages just won't keep up.

So what will people do?

U. S. workers will ask for more money. Since labor is scarce, a lot of them will get it. Then farmers and business men who

feel the pinch are going to ask more money for their goods.

And prices will go *still higher*. And the majority of us will be in that same old spot again—only worse.

This is what is known as Inflation.

Our government is doing a lot of things to keep prices down . . . rationing the scarcest goods, putting ceiling prices on things, stabilizing wages, increasing taxes.

But the government can't do the *whole job*. So let's see what *we* can do about it.

This way the 45 billion dollars will make us prosperous

If, instead of running out with our extra dough, and trying to bid on everything in sight, we buy only what we absolutely need, we will come out all right.

If, for instance, we put this money into (1) Taxes; (2) War Bonds; (3) Paying off old debts; (4) Life Insurance; and (5) The Bank, we don't bid up the prices of goods at all. And if besides doing this we (6) refuse to pay more than the ceiling prices; and (7) ask no more for what we have to sell—no more in wages, no more for goods—*prices stay where they are now.*

And we pile up a bank account. We have our family protected in case we die. We have War Bonds that'll make the down payment on a new house after the war, or help us retire some day. And we don't have taxes after the war that practically strangle us.

Maybe, doing this sounds as if it isn't fun. But being shot at up at the front isn't fun, either. You have a duty to those soldiers as well as to yourself. You *can't* let the money that's burning a hole in your pocket start setting the country on fire.

★ ★ ★

KEEP PRICES DOWN!

Use it up
Wear it out
Make it do
Or do without

MILL NEWS

WYTHEVILLE, VA.—Wytheville Woolen Mills, destroyed by fire last February, will not be rebuilt.

JOHNSON CITY, TENN. — Leon-Ferenbach, Inc., silk throwing firm, recently purchased property adjoining the mill. It will be made use of in the expansion program planned by the management.

FAYETTEVILLE, N. C.—McElroy Mills, Inc., which had 21 looms on the manufacture of spun rayon fabrics, has gone out of business. W. R. McElroy was president, R. L. Huffines, Jr., manager and vice-president.

CONCORD, N. C.—Concord Silk Throwing Co., which operated 6,500 spindles, has been liquidated. President of the company, which had a capital of $85,000, was A. R. Hoover, Jr. Manager and treasurer was Hugh M. Grey.

STATESVILLE, N. C.—Phoenix Mills, Inc., has been acquired by I. Rogeson of Beaunit Mills, Inc., New York City. The plant is equipped with 5,520 wool spindles and 200 knitting machines. T. C. Frank will be local manager.

RALEIGH, N. C.—Premier Worsted Co. has been established in the buildings of the former Caraleigh Mills. Herbert Lawton of New York is president and J. M. Shockley is superintendent of the mill, which has 4,800 spindles and 48 looms.

BOILING SPRINGS, N. C.—Pearl Mills has been organized by R. J. Woods of Waco, N. C. Installation of 2,520 spindles for the manufacture of coarse yarn is being completed in the building formerly used by Boiling Springs Hosiery Mill.

CHESTER, S. C.—Five of the most recent Saco-Lowell carding machines have been installed at the Springstein plant of Springs Cotton Mills. Officials of the Springs chain report that all seven plants are operating 80 per cent on Government contracts.

LINCOLNTON, N. C.—The plants of Glenn Mfg. Co. and Melville Mills, Inc., are now being operated by W. W. Glenn Co. W. W. Glenn is president, Dan M. Boyd general manager and G. C. Turner superintendent. In operation are 15,808 spindles which produce combed sewing thread and combed yarns.

GREENSBORO, N. C.—Following the retirement of R. P. Shapard, Jr., of Griffin, Ga., as president of Piedmont Silk Co., C. C. Harding has become president and treasurer and J. C. Bullock secretary and superintendent. Mr. Harding was formerly secretary-treasurer of the plant, which has 10,000 throwing spindles.

KINGS MOUNTAIN, N. C.—Employees and officials of Freida Mfg. Co. gathered recently to dedicate an honor roll containing the names of 37 men who have gone from the Freida community to the armed services. Band music, ice cream and watermelons were enjoyed by the more than 600 persons present.

MARION, N. C.—At a meeting of the directors of Marion Mfg. Co. following the death of the firm's vice-president and treasurer, S. L. Copeland, the following were advanced to new positions: R. W. Twitty to vice-president and treasurer; Charles A. Harris to vice-president and assistant treasurer; Terry A. Moore to secretary; and Therman L. Richie to assistant superintendent.

WELDON, N. C.—Perfection Mills, Inc., has been reorganized as Weldon Knitting Mills, Inc. O. G. Morehead is president and superintendent, and Sloan E. Shirley is secretary and treasurer. The plant's 25 circular knit machines are idle at present. Mr. Morehead recently sold his interest in St. Pauls (N. C.) Textile Corp. to Burlington Mills Corp., Greensboro, N. C.

MOBILE, ALA.—Aetna Insurance Co. and ten other plaintiff insurance companies have won their case in U. S. District Court here seeking to cancel $725,000 worth of insurance policies on the J. C. Sanders Cotton Mill which burned last summer. J. C. Sanders Cotton Mill Co. and its president, J. C. Sanders, had filed claims against the companies for $540,000. In his closing charge to the jury, Judge John McDuffie told the jurors they must consider carefully the circumstances that led up to the fire and what part "this defendant (Sanders) had in it." About 3,000 spindles and 100 looms of the plant have been put in operating condition.

GREENSBORO, N. C.—In its recently expanded modern laboratory Burlington Mills Corp. now establishes and controls the quality standard of all products, tests various ideas for the improvement of products, and centralizes scientific testing and research. Two new features of the laboratory are the reinspection department and war division. The reinspection department double checks goods previously inspected and graded by individual plants of the Burlington chain.

Prior to the war, the principal products of the Burlington Mills Corp. were underwear fabrics and fine rayon dress goods. At present a large majority of the business is for the war effort, with the United States Government as the corporation's largest customer. For the Army and Navy and other Government agencies, more than 20 different types of fabrics are being made, including fine-denier nylon fabrics, heavy two-ply, 300 denier rayon fabrics, rayon-cotton fabrics and all-cotton fabrics.

PERSONAL NEWS

W. O. Reed of Gastonia, N. C., will become overseer of spinning at the Pelham, Ga., plant of Clark Thread Co. Sept. 1.

Graham A. Anthony, president of Veeder-Root, Inc., Hartford, Conn., has been appointed to the New England Regional War Labor Board.

J. D. Smith has resigned as overseer of spinning at the Riverside division of Riverside & Dan River Cotton Mills, Inc., Danville, Va.

J. A. Long, Jr., purchasing agent and assistant treasurer of Roxboro (N. C.) Cotton Mills, has been appointed to the board of commissioners of Person County.

A. J. Wright has been promoted from overseer of spinning and twisting to superintendent of Plant No. 3, Carolina Textile Corp., Hamer, S. C.

Mac Haiston is now superintendent of Houston (Tex.) Cotton Mills, with I. L. Starns in charge of the first shift and Will Gaines of the second shift.

Lieut.-Comdr. Ernest Burwell, U. S. N. R., who participated in many Army-Navy "E" award ceremonies in the South, has been transferred to a station in the Pacific.

Louis Cohen has become superintendent of Birmingham (Ala.) Cotton Mills, succeeding O. H. Dunn, now superintendent at Tifton (Ga.) Cotton Mills.

Ira L. Griffin, Southern manager of Stein, Hall & Co., has been a patient at Presbyterian Hospital, Charlotte, N. C., recovering from a recent operation. He is expected to resume his duties in the near future.

Lieutenant James D. Hammett, formerly assistant treasurer at Chiquola Mfg. Co., Honea Path, S. C., has been transferred from the textile branch of the Office of the Quartermaster General, Washington, D. C., to Camp Lee, Va., where he is taking advanced training prior to receiving a field assignment.

A. E. Jury, formerly agent of the Winnsboro (S. C.) Mills of United States Rubber Co., has been appointed factory manager of the company's Los Angeles synthetic rubber plant, according to an announcement by J. P. Coe, general manager of the synthetic rubber division. He has been succeeded at Winnsboro Mills by M. A. Kirkland, production manager. Mr. Jury joined United States Rubber Co. in 1915 to organize the company's first textile development laboratory, after spending some years in New England mills. He later headed the general development department of the company. In 1928, when the company took over the operation of its first textile mills at Winnsboro Mr. Jury was named agent and continued in that capacity until he received his present appointment.

A. E. Jury

E. Kent Swift, president of Whitin Machine Works, Whitinsville, Mass., has been elected a director and trustee of Pepperell Mfg. Co.

Charles L. Taggart has been named superintendent of the Calumet plant of Calloway Mills, LaGrange, Ga., succeeding J. Morgan Jackson.

William L. Hicks, formerly an instructor of textile chemistry and dyeing at Clemson College, S. C., has been promoted from first lieutenant to captain at the Jeffersonville (Ind.) Quartermaster Depot.

Furman M. Burton, formerly overseer of spinning, spooling and warping at the Toxaway plant of Gossett Mills, Anderson, S. C., has been named superintendent of the chain's Pendleton, S. C., mill.

John G. Page, service superintendent of the Martinsville, Va., plant of E. I. du Pont de Nemours & Co., recently addressed the Martinsville Kiwanis Club on industrial safety and accident prevention.

William C. Appleton, president of American Viscose Corp., has been appointed a member of the Wilmington, Del., and Chester, Pa., executive committees of the Committee for Economic Development.

William A. B. Vivian, chief plant engineer at the Nitro, W. Va., plant of American Viscose Corp., has retired after 17 years of service, and has been succeeded by Edward A. Morse.

Marshall Dilling, executive secretary of the Southern Textile Association, was confined recently at Memorial Hospital, Charlotte, N. C., for a kidney operation. He is now reported to be recuperating nicely.

W. Irving Bullard, president of E. H. Jacobs Mfg. Co., has been appointed head of the non-resident firms division of the Charlotte (N. C.) War and Community Chest. He will be in charge of securing donations from firms whose home offices are in other cities.

A. A. Whitener, president and treasurer of Rhodes-Whitener Mills, Inc., at Taylorsville, N. C., and Rudisill Spinning Mills, Inc., Lincolnton, N. C., announced on his 69th birthday recently that he would retire from his law practice at Hickory, N. C.

C. Morganstern, who for the past two and one-half years has represented the Clinton Co. at Cincinnati, Ohio, has been appointed manager of the New England office of Clinton Sales Co., Inc. His headquarters will be at Somerville, Mass.

F. P. Bodenheimer, formerly superintendent at Quaker Meadow Mills, Inc., Hildebran, N. C., has become the representative for Victor Ring Traveler Co. in northern North Carolina, parts of Virginia, Tennessee and adjoining areas. He was at one time employed at National Cotton Mills, Lumberton, N. C., and Granite Falls (N. C.) Mfg. Co.

TEXTILE BULLETIN

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David Clark - - - - - - President and Editor
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F. R. Carey - - - - - - - Vice-President
James T. McAden - - - - - - Associate Editor
Ellis Royal (On leave in U. S. Army) - - - Associate Editor

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Three Textile Foundations

We are very much pleased to point out that there are now three textile foundations instead of one, since the textile manufacturers of Georgia and South Carolina have formed organizations somewhat similar to the North Carolina Textile Foundation, Inc., which was incorporated in December, 1942.

The North Carolina Textile Foundation, Inc., asked the mills for approximately 10 cents per spindle and specified that their energies would be directed through the Textile School of N. C. State College. It proposes to finance textile research but is primarily interested in educating young men for the operation of textile plants and in securing the highest type instructors who can be obtained. Plans are to spend about $40,000 of the principal and interest each year, and, upon the basis of $600,000 which is expected to be raised, the funds will extend over a period of more than 15 years.

The incorporators believe that developing better trained men for the near future is more important than conserving their capital.

The Georgia Textile Foundation plan has been pitched upon the basis of 20 cents per spindle and, probably because of the interest in textile research, which has been developed by Fuller E. Callaway, Harrison Hightower and others, it already has pledges of $384,000 upon that basis.

Among the large contributors are:

Bibb Mfg. Co.	$50,000
Callaway Mills	35,000
Thomaston Cotton Mills	30,000
J. P. Stevens & Co., New York	25,000
Pepperell Mills	22,000

While many of the New York selling agents declined to contribute to the North Carolina Textile Foundation, Inc., upon the ground that they might have to contribute to similar foundations in Georgia and South Carolina, J. P. Stevens & Co., took the broad view that the development of the textile industry, and the resultant production of more and better textiles, would mean a great deal to the firm and willingly gave $25,000 to each foundation.

The Georgia Textile Foundation expects to do most of its work through the Textile School of Georgia Tech but will not be restricted in aiding textile research at other institutions.

The South Carolina Textile Foundation has asked for contributions of 1 per cent of profits for 1943 and 1944 and has set its goal at $1,000,000.

Its founders are primarily interested in textile research and have not tied their organizations to any college or institution.

They have specified that only the interest upon their investments can be used. We think that that was a mistake, as they will have difficulty in obtaining a return of 1¾ per cent upon investments and if they attain their objective they will have only $17,500 per year to cover research and expenses.

The primary interests of the three textile foundations, if we understand them correctly, are:

North Carolina Textile Foundation

Training textile students at N. C. State College under the best teaching staff available and also engaging in textile research.

South Carolina Textile Foundation

Textile research the primary objective with assistance to persons engaged in such research no matter where they are stationed.

Georgia Textile Foundation

Primary interest in textile research but also a definite interest in better trained textile students but such interest not limited to Georgia Tech.

That there should be differences in viewpoints and differences in methods of operation was to be expected, but the big thing is that these three textile foundations have been established and their organization represents a great step forward in the life of the textile industry of the South.

The North Carolina Textile Foundation, Inc., being organized in December, 1942, came into existence after the fiscal year of many mills had closed, and some such mills preferred to wait until this year to contribute. The foundation has collected and now has banked or in Government bonds in excess of $400,000 received from 174 individuals and corporations. It will soon make a drive for the other $200,000 which is needed.

The assistance of traveling salesmen is solicited and we cite with appreciation the fine work of H. B. Summerell of the North American Rayon Co., who has personally secured more than 20 donations from individuals and mills.

May Awake Too Late

A certified public accountant said to us last week; 'Many textile manufacturers are absolutely asleep and I am afraid that they are not going to wake up until September 16th, which will be one day after the last day upon which they have a right to establish something which may mean a great saving for their mills."

He referred to the right which any manufacturer has, up to September 15th, 1943, and under Section 722 of the Internal Revenue Code, to ask relief on 1940, 1941 and 1942 excess profit taxes.

With an excess profits tax liability based upon 90 per cent of adjusted excess profits net income, the relief may mean much to many textile mills, but we are afraid that many managers are peacefully sleeping upon their rights and will probably continue to sleep until after the deadline of September 15th, 1943.

Under the excess profits tax law manufacturers have the option to establish as "normal net earnings"

(1) Eight per cent upon invested capital.
(2) The average net earning for the four pre-war years of 1936 to 1939.

The years 1936 to 1939 were not years of average or moderate prosperity for all members of all industries, or even for all industries. A great many individual corporate taxpayers, due either to conditions and factors peculiar to their businesses, or peculiar to the industry of which they are members, did not realize earnings during the year 1936 to 1939, which represent a fair and just reflection of "normal earnings" for their businesses. Congress recognized this fact and in Section 722 provided relief to those corporations which are adversely and inequitably affected by the application of the general 1936-1939 formula by providing that any corporate taxpayer, the average base period net income of which is not an adequate standard of normal earnings, and which might therefore be required to pay an excessive and discriminatory excess profits tax, is eligible for relief under Section 722.

The average base period net earnings of a taxpayer are regarded as inadequate or abnormal in a number of situations and for a number of reasons. Its normal production, output, or operation may have been interrupted or diminished during one or more of the base period years by a strike, a flood, a fire, or other event unusual in the normal experience of the taxpayer. Its business may have been depressed during the base period years by some temporary economic circumstance.

A taxpayer may have commenced business during or immediately prior to the base period, or during that period may have effected material changes in his business methods; perhaps the management was changed, new machinery installed, a new plant opened, or its production or services altered, or some new and important production method discovered. These are but examples; it is entirely possible that normal base period operations were interrupted or materially affected by some other factor of a different but generally comparable nature.

Among the conditions under which relief is justiged under Section 722 may be:

(1) Immediately prior to or during 1936-39 base period the mill may have added or changed machinery or changed the type of goods produced and therefore had disadvantages incident to such changes.
(2) It may have been in process of carrying out a plan which later improved the demand for its product and the prices received for same.
(3) It may have been in process of making improvement or changes in equipment or in methods of operation which resulted in a widening of the margin of profit on each unit of goods made.

If the answer to any of these questions is in the affirmative, it is important to consider the exact nature of the changes effected. Was the plant modernized by the installation of new or different machinery or by substantial relocation of existing machinery? Was a new plant opened? Was some new or materially improved production method developed or discovered? Was there a change in the operation or management of the business? Was any change made in the nature of the production or services furnished? Was there a change in the ratio of non-borrowed capital to total capital? If no change was effected during or immediately prior to the base period, then was any such change made thereafter due to a course of action to which my company was committed prior to January 1st, 1940?

If base period earnings were not disturbed or materially affected by any of these listed factors—which may be described as factors resulting from some course of action or activity initiated by the company —then the manager should ask himself whether the 1936-39 base period earnings were depressed or rendered abnormal by some other factor or circumstance which was, perhaps, beyond his control. Was the business depressed because of some temporary economic event unusual to the industry to which his company is a member, such as a general price war within the industry extending over one or more of the base period years? Is the industry of which his company is a member subject to an unusual profits cycle materially different from the general business cycle?

If a mill is satisfied that any of the above factors affected its average profits during the base period of 1936-39, it may reconstruct another base period under Section 722 and the "reconstruction period" profits may be used in place of the average profits for 1936-39.

For instance, it may be shown that the manufacturing margin on combed yarns averaged consider-

(*Continued on Page 44*)

His Wings are Clipped But He'll Fly Again

Thirty seconds to leave a sinking plane . . . the first thought of the bomber crew is for the boats of rubberized canvas duck.

This tough, durable fabric is saving thousands of lives . . . enabling men to fly again.

Each plane is equipped with boats that are strong enough to protect both crew and provisions, and are still light enough when deflated to be easily stored aboard planes.

Duck was long a bottleneck in the production of Textiles for war. But, America's great mills have succeeded in stepping up production to meet today's increased demands.

Butterworth Machines play their part in the battle of production at every step in the wet end of textile finishing—bleaching, boiling-out, drying, calendering, dyeing.

The cooperation of Butterworth Engineers is freely offered to every mill seeking to achieve increased productive efficiency . . . or to repair or replace worn-out or obsolete equipment.

All of our facilities not required for Ordnance production are available to help you solve your problems. Let us serve you now.

H. W. BUTTERWORTH & SONS CO.
Phila., Pa. Serving the Textile Industry since 1820
Offices in Providence, R. I. and Charlotte, N.C.
In Canada: W. J. Westaway Co., Hamilton, Ont.

***64%**

of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

*Proved by Research

Butterworth

PRODUCING GUN MOUNTS FOR THE UNITED STATES ARMY

DYEING AND FINISHING

Turning Minus Products Into Plus Ones

By GEORGE BROUN

Part Six—Protein and Glass Fibers

IN Part Five of this series, the writer referred to the research and development work carried out by the Ford Motor Co. in utilizing the soybean. The company first developed finishes for automobiles and various types of paints, and had under limited production a synthetic fiber when wartime conditions called a halt to further experimental and development work. It is regretted that this excellent piece of development work of that great industrial pioneer, Henry Ford, is held up, and all industrial and technically minded Americans sincerely hope that the Ford Co. or some equally able organization will go forward with the development and utilization of soybean in the manufacture of synthetic fibers and yarns.

The synthetic fibers and yarns produced from soybean gave the best all around dyeings, manufacturing and finishing results yet obtainable for a substitute fiber for wool. This soybean fiber dyes with acid and chrome colors quite closely to wool in shade, depth and fastness properties. When blended with wool stock, it finishes up closely to an all-wool blend and the dyeing, manufacturing and finishing costs were closely in line.

A rather interesting property of this fiber is its resistance to moths as well as its similarity to wool in heat retention and thermal insulation characteristics. The breaking strength of soybean fibers closely approximated those of wool and its resistance to wear was similar. For this reason, it had shown real possibilities for use in blankets and upholstery goods.

A brief summarization of the manufacturing process for soybean fibers as now known is that the soybeans are crushed, and from the meal the oil is extracted. Then the de-oiled meal is treated with a salt solution, thus removing the protein element. This protein element is then treated and formed into a viscous solution. The viscous solution is formed through the usual spinneret into a chemical bath that coagulates the fiber. From the coagulation bath, the fiber is wound onto forms where it is bleached and finished ready for winding and further processing.

Fibers From Corn

The corn starch refiners have discovered that zein, a protein compound found in corn meal, can be made into a synthetic fiber. This synthetic fiber is produced along the same lines as casein fibers through the use of an aldehyde as a coagulating agent when the viscous zein solution is forced through the spinneret into the coagulating bath.

Fibers made from zein are best dyed by including the necessary color in the spinning solution as now being used on other protein plastic compounds. This is a problem that could probably be overcome if the corn starch makers find methods that are economical and practical for the manufacture of this fiber on a large scale after the war. With the present limitations on the use of corn for manufacture of starch, this experimental work is being held up at present.

Fibers From Glass

Glass fibers are "going places" nowadays in two fiber forms; one has a wooly appearance while the other looks like an ordinary textile yarn. The wooly fiber is used for insulation purposes and it is prepared in the form of blankets, boards and batting and is being used in many types of installations for both wartime and peace time purposes.

One of the wartime purposes is its use in insulating and protecting aeroplane fuels and oils in the stratosphere type of flying planes. It also acts as a "cushion" for radios, batteries and other intricate devices user on naval ships.

The textile fibers are made into yarns and woven into fabrics that possess excellent electrical insulation properties as well as high resistance to many chemicals except strong alkalies.

A well known glass chemist was queried as to the physical and chemical construction of glass, to which he replied that glass manufacture is still largely in the emperical stage and is very much of a mystery yet. There are thousands of formulae for the manufacture of glass, and the formulae used for the manufacture of the wooly insulating glass fiber as well as the textile appearing fiber may be varied to obtain certain characteristics suited for various purposes.

These textile glass fibers may be ten to 20 times finer than the ordinary hair of human beings and yet possesses tensile strength greater than steel of similar diameter.

The manufacturing of the textile fiber types has been carried out by two different processes; one resembles the staple rayon fiber and is known as the staple fiber process, while the other is called the continuous filament method. Each process uses an electrically heated furnace made with high heat resistant metallic bushings with numerous minute orifices in the end and the glass balls are heated and drawn off as fibers through the downward gravity pull. This is known as the filament method and these minute filament

fibers after being drawn off may be wound together to produce a yarn of any desired size.

The staple process uses the molten glass marbles and differs from the filament method in that the molten glass is blown by high steam pressure through openings and the moisture from these short staple glass fibers is removed by passing through a flame. The staple fibers are then picked up on a grooved rotary drum. These short staple fibers may be spun on various textile spinning systems, and has been made up into practically all of the standard yarn forms such as beams, spools, cheeses, bobbies, tubes and cones.

These glass fiber yarns have been prepared in very fine yarn number up to 80 and 120 singles.

Properties of Glass Fibers

The glass fiber makers are incorporating colors into these fibers that are fast to all types of weathering, sunlight and heat. Glass fibers possess many interesting and valuable properties. These are:

(1) Resistance to practically all acids except those acids that etch any type of glass (phosphoric and hydrofluoric).
(2) Resistance to most of the milder and strong alkalies except hot concentrated caustic soda solution.
(3) Good thermal insulation.
(4) Good electrical insulation.
(5) All coloring of these glass fibers must be carried out in the preparation of the glass balls used in making the glass fibers.
(6) Glass fibers are waterproof.
(7) Glass fibers, yarns and fabrics when protected by a flexible coating possess higher tensile strength as well as resistance to abrasion.
(8) Glass fibers and yarns, when placed on denierage basis, possess a tensile strength of five to eight grams per denier. The tensile strength may be varied considerably through changes in the chemical composition.
(9) Glass fibers vary in weight according to chemical make-up of formula and comparative size yarns of glass show one and a half to three times the weight of a similar size cotton yarn of the same diameter.

Glass fibers and yarns require special types of sizing and lubricants for weaving of the yarns. Due to its fireproof and chemical resistance, glass fiber possesses great potential possibilities for many industrial purposes as well as home uses, such as curtains, draperies, upholstery, table covers, floor and wall coverings. Its value as a decorative fiber will naturally increase if economical methods can be worked out for printing of glass fabrics so that the design possesses permanence.

Training School Gets Extra $57,000

Meeting at Raleigh Aug. 3, the North Carolina Council of State authorized the allocation of an additional $57,000 for completion of the state's Textile Vocational School near Belmont. This makes a total of $232,000 which has been appropriated by the state and textile manufacturers for operation of the institution. So far, three of the six faculty members have been employed. They are T. W. Bridges, superintendent, Newman McIntyre of Shelby, N. C., and Charles Whitesell of Charlotte, N. C. The school will open Sept. 1.

Textile Export Label Is Adopted

The Textile Export Association of the United States in co-operation with the Office of War Information has initiated a campaign to label uniformly and prominently all shipments of American textiles to foreign markets.

A red, white and blue label containing a sketch of the Statue of Liberty and bearing the caption, "Imported from the United States," has been approved by members of the association, and from now on will be used to identify all shipments of American textiles, both large and small, to markets overseas.

For the last three years many countries have been forced to rely on American mills for the bulk of their textile necessities with the result that American styles and qualities have won wide acceptance. Adoption of this label, it is believed, will go far toward enhancing the popularity of American textiles in markets abroad.

The label is almost identical with that adopted by several other industries for export shipments.

Commenting on the campaign, William C. Planz, president of the association, stated: "American textiles are as characteristic of the United States as automobiles, radios, airplanes and many other types of manufactured goods which have won for American producers the respect and admiration of the world. More than ever before, customers in foreign markets have come to appreciate the durability, high quality and distinctive styling of American textiles. Adoption of this label by the trade is but one of the many steps the textile export trade is taking to build up foreign outlets for the post-war years."

WPB Yarn Order Is Qualified

English-spun cotton yarns allotted to the lace and netting industry for military production may be released for other specified uses through appeals taken under Order M-272 (Imported Cotton Yarns and Fabrics), officials of the textile, clothing and leather division, War Production Board, indicated recently. A large part of the facilities of these manufacturers has been reserved for production of military equipment.

It was emphasized that use of the yarn may be made only with specific permission of the War Production Board, which will specify permitted uses in each instance. Manufacturers having supplies of the English-spun yarn on hand which are not presently needed for military requirements have been requested file an appeal by September 1 with WPB under Order M-272 setting forth all relevant facts, indicating the amount of unused yarn on hand and the end-product desired to be produced.

Drainage Engineers Use Osnaburg

One of the newest uses for osnaburg is reported by the Bureau of Reclamation, United States Department of the Interior. It is being used for the reinforcement of low-cost asphalt canal linings at Notus, Idaho. Use of the fabric greatly increases the toughness of the lining and adds a considerable safety factor against stresses and shocks. It is believed that recent advances in devising and applying mildewproofing to cotton fabrics will assist in spreading the use of osnaburg in irrigation canals and drainage ditches.

American Association's Board of Governors Has First Meeting

Cotton mills of the United States face five major tasks in the "imperative planning" for post-war operations, said Hugh Comer, president, at the initial meeting at Charlotte, N. C., Aug. 3, of the American Cotton Manufacturers Association's recently elected board of governors.

These five chief objectives which Mr. Comer said the association will work toward during the year of his administration were listed, as follows:

1. Form and make effective, in co-operation with the National Safety Council, policies which will assure safe, clean, healthful places in which the employees will work.

2. Develop a policy of the industry's relation with the Federal Government, particularly as regards renegotiation of war contracts, which will enable the industry to "avoid any appearance of being an excessive profit industry" while striving for reasonable profits and "safety" capital reserves.

3. Study of markets, development of new textile designs and materials and promotion of new uses for textiles with the view of assuring maximum post-war employment and production.

4. Co-operating closely with the machinery industry in the engineering of new models of textile machinery for manufacture when metals and other materials, now critical for the war effort, become available after the war for civilian requirements.

5. Co-operating through the American Farm Bureau Federation with the cotton growers with the view of still further improving grades and staples in this fiber.

One of the principal subjects for discussion at the board's conference was the appointment of the association's standing committees. Mr. Comer said this year it is particularly necessary that all committees be "active rather than decorative."

Foremost among the objectives "must and will be" further betterment of safety and health conditions in the mills, stated the association's president. He explained that these policies will be worked out and carried forward in close co-operation with the Federal and State Departments of Public Health and of Labor and with the state associations of cotton manufacturers.

The problems of safety and profits, said Mr. Comer, necessarily are tied directly to the industry's legislative problems, and these are such that the industry should "carefully avoid any appearance of being an excessive profits industry." The legislative committee will be expected to concentrate its thought and effort particularly on the subjects of contract renegotiation and taxation, he said.

Mr. Comer indicated that the American Association expected to initiate conferences soon with leaders in the Government and in the Congress on the subject of capital reserves to finance inevitable post-war readjustments. He further indicated that the association's views with respect to reserves have not yet crystalized but the legislative committee should experience no difficulty in arriving at firm conclusions.

Throughout Mr. Comer's remarks was emphasized his impression that, while continuing the all-out war effort, the industry should keep foremost in its minds the great responsibilities which must be met in the post-war period, for which adequate planning now is essential. His primary objective, it was indicated, is the promotion at once of the

industry's long-term economic safety and the employees' welfare in keeping with expected further lifting of American living standards.

Because of these views, Mr. Comer placed great emphasis upon his declaration that "unquestionably, we will give a lot of attention to post-war planning and the probable problems of that period because of our obligation to provide high employment, which is vital to the general welfare."

At the same time, it is definitely to the industry's advantage to encourage cotton growers to provide ample supplies of still higher qualities of cotton to assure ample production of the finer textiles that are expected to be in demand along with the forecast American prosperity. Also, in addition to this anticipated great domestic demand, this industry should expect a tremendous export demand to supply at least in part the accumulated textile needs of the now war-worn countries.

Military Requirements for Woolen and Worsted Items Reduced

Several million woolen and worsted garments and blankets will be added to the civilian supply this winter as a result of a program arrived at jointly by the War Production Board and the War Department reducing by 50 per cent Army procurements on some of the principal worsted and woolen products during the last four months of this year, it has been announced by WPB.

The program was developed through WPB-Army cooperation after it was found that a substantial proportion of Army requirements for woolen and worsted products for the last third of this year could be deferred until the first four months of 1944.

The Quartermaster Corps, in line with the program, is advising the mills providing these Army goods that they may re-schedule their deliveries to effect a 50 per cent cut from September through December, 1943, if they submit a schedule satisfactory to the Army. Military-Lend-Lease items are not affected. However, the deferred deliveries, if approved, would be made during the first four months of 1944.

Effect of the action will be to make a substantial production capacity immediately available for manufacture of civilian goods needed during the coming winter. No exact figures as to the amount of yardage which will result have been compiled thus far, but conservative estimates are that more than 10,000,000 additional yards of woolen and worsted fabrics will be routed into civilian channels.

In advising Army contractors that they may curtail deliveries in the last four months of the year, the Quartermaster Corps, mentioned specifically reductions in the deliveries of blankets, overcoatings, 18-ounce serge, 10½-ounce shirting flannel and 12-ounce lining.

Manufacturers were requested to review their production schedules immediately and to wire the Philadelphia Quartermaster Depot the details of their revised schedules.

War babies soon will be dressed in the finest of cotton balloon cloth prepared for barrages. The Government has ordered a limited supply of this high quality material released for civilian use. The material already is showing up in some piece goods departments and later will appear in ready-made dresses for babies.

War Production Board Releases 450,000 Yards Of Silk 'Chute Cloth

Approximately 450,000 yards of silk parachute cloth rejects have been released by the War Production Board for manufacture of women's underwear (including brassieres) and baby pants, officials of the WPB textile, clothing and leather division disclosed recently.

The material represents yardage in varying lengths and sizes which failed to meet Army standards for fabrication into parachutes due to structural and other defects.

Release of the material from the stocks of individual manufacturers was ordered after it was determined that there was no military use for it.

Acme News Describes Safe Shipping Methods

How deaf-mutes are doing their part in the war effort, the way jeeps, Airacrobras, tanks and prefabricated huts are packed and steel-banded to reach their destination in perfect condition are interestingly told in the current issue of *Acme Process News* No. 13. Also included are articles describing how speedier carton stitching is accomplished, replacement parts for Army vehicles, dehydrated juices, explosives, military supplies, electric furnaces, textiles, Naval uniforms and even candy for soldiers are prepared for a safe journey. Free copies of their informative house organ are available from the Southern office of Acme Steel Co., 603 Stewart Ave., S.W., Atlanta, Ga.

Index to Advertisers

Changes in Testing Procedure Proposed

On recommendation of the Textile Fabrics Association, American Association of Textile Chemists and Colorists, and the National Association of Dyers and Cleaners, the National Bureau of Standards of the U. S. Department of Commerce has submitted for trade consideration a recommended revision of woven textile fabrics testing and reporting, Commercial Standard CS59-41 (TS-3553).

The revisions are being submitted to producers, distributors and users for written acceptance prior to publication.

The principal changes are (1) the broadening of the scope to cover all textiles, whether woven or not, with a corresponding change in title; (2) the addition of new methods of testing and reporting bursting strength of knit fabrics and colorfastness to atmospheric gases; (3) changes in methods of testing and reporting for colorfastness to chlorine, dry cleaning and laundering of rayons; (4) a new series of methods of reporting on colorfastness to dry cleaning, crocking, perspiration and pressing; (5) the elimination of the term "Fade-Ometer;" and (6) the inclusion of additional standard samples for use in the check tests to assist in obtaining comparable results.

New Waterproofing Method Discovered

Discovery of a method of waterproofing cloth without the use of rubber or other materials was announced recently in London, and the "self-sealing" fabric now is being extensively supplied to the British Government for war purposes. It has not yet reached the civilian market, but a big future is predicted for it.

The method was evolved by Dr. F. T. Price of the British Cotton Industry Research Association's Shirley Institute.

Classified Department

SUPERINTENDENT, now employed, would consider change to better position as Superintendent or Manager. 43 years of age, family, energetic, efficient, with years of successful experience on all types of cotton yarns and cloth. Am not interested in offer for duration. Address "K. L. L.," c/o Textile Bulletin.

MILL SUPERINTENDENT wants position. Years of successful experience making a variety of yarns and cloth; plain and fancy. Efficient and aggressive. Good manager of help. Draft exempt. Best of references. Address "Box 500," c/o Textile Bulletin.

WANTED—Position as Cloth Room Overseer; age 33, now employed by large corporation as second hand in South Carolina mill. Married, sober. Have one child. 15 years' experience with twills, sheetings, jeans. Satisfied with present job, but salary too small. Prefer Carolinas. References upon request. Address "J-A," c/o Textile Bulletin.

SUPERINTENDENT-CARDER. Services available. Experienced on all staple and grade cotton; plain and fancy weave. References. Address "Box G-A," c/o Textile Bulletin.

WANTED—By first-class Roller Coverer and Belt Man, job as foreman of mill shop. Now in charge of commercial shop. Would change for same money to mill shop and house. Draft Class 4-F. Address "No. 7," c/o Textile Bulletin.

Cotton Goods Market

NEW YORK.—Numerous dark clouds continue to confuse the situation in the cotton goods market, and very little hope is seen for releasing production of mills to civilian customers in the near future. Up to now buyers have been standing by hopefully for a lull in Government demand are becoming desperate when they realize that the situation shows no likelihood of getting better.

Shortage of experienced help, compelling mills to close down their third shifts and reducing the output even on the double shift, is blamed for the situation. The view has been expressed that with the seasonal change there may be an improvement in the production schedule, but as long as the weather remains hot there are only slight chances for this happening.

Recent sales in the cotton gray goods market have reflected the apathetic feeling prevalent currently in mill centers. Only sporadic deals were transacted and mostly on priority rated orders. Buyers anxious for goods continue to press their resources with only little success.

Extension of delivery periods from nearby to slightly further ahead, by some houses in the cotton gray goods market recently, engendered a more optimistic feeling with respect to future commitments. Along with the tendency to lengthen forward contracts, one of which is expected to be adopted by a number of other houses shortly, there has been a noticeable trend toward expanding the quantity of yardage let. The latter condition also is not general, yet the willingness of some selling houses and mills to take on more civilian business is being watched with considerable interest.

The movement of goods has been far from a broad one, but in comparison with the disposals of the past several weeks is a decided improvement, many are inclined to feel. Also the idea was expressed in several centers that mills in their willingness to take on future business are doing so in much the same ratios as they booked nearby orders in the past. This may account for the impression that more goods are coming out, which is true in the sense that bookings are greater, but the periodical allotments are much the same, some were inclined to feel mills could accept additional business for nearby delivery without endangering their position.

Cotton Yarns Market

PHILADELPHIA.—An improvement in the carded and combed yarn situation is expected in quite a few quarters of the market following recent reports that some spindles will be returned to civilian production. Yarn suppliers claim to have been informed the shift is being begun now so that a confusing all-out changeover will not take place later.

In support of this expectation, it is stated that cancellations already have been noted in certain military items; that there have been hints of a top-heavy inventory position in basic fabrics and in some of the apparel items; that the number of soldiers now in active service is much smaller than estimated, and that attrition of clothing and equipage has been less than was provided for; and that it constantly becomes clearer that the war may come to an early ending.

Reports reaching suppliers' and spinners' agents seem to indicate that while other Government buying agencies may take over part of the merchandise not wanted by the armed forces, a very considerable yardage may be cancelled or the remaining deliveries deferred into 1944, as already has been arranged for in the case of blankets and woolen and worsted cloths.

Having been instrumental in assembling a great deal of yarn for war work, market interests now expect to be called on to find civilian outlets for whatever will not be taken in by Army contractors.

Inquiries received from weavers and knitters depending on sale cotton yarn are reported to have subsided somewhat in recent days, which is attributed partly to seasonal influences, but also to civilian buyers being discouraged by their lack of success in recent weeks. Market interests look for civilan supplies of yarn to continue to be restricted to a hand-to-mouth basis until late next month at the earliest. But they report the availability of yarn for such consumers will be larger in August than in the previous two months.

The important changes now under way in international affairs, it is said here, seem likely to restore civilian supply of yarns and goods gradually from now on. Yarn mill production in August is counted on to exceed that of July, and some of the wartime demand for yarn has diminished. It is expected this trend will continue.

EDITORIAL

(*Continued from Page 33*)

ably less during 1936-39 than the 1918 to 1938 inclusive average.

Under such circumstances the average margin of 1925-28, or any other four years, may be determined and the profits of 1936-39 reconstructed upon that basis.

We know that one combed yarn mill which had entered a deduction of approximately $100,000, based upon 1936-39, reconstructed the profits of those years upon the basis of 1925-28 margins and was able to establish an excess profits deduction of more than $250,000.

Not only will its 1940, 1941 and 1942 taxes be recomputed but the newly established figure will apply upon 1943 and subsequent years.

Had the 1925-28 average margins been less than the average from 1918 to 1938 they could not have been used, but experience shows that averages for 1925-28 are approximately the same as for 1918 to 1938 because the longer period includes the high profit years of 1919 to 1924.

Income tax officials have no objections to mills "reconstructing" their 1936-39 profits upon other four-year periods such as 1925-28 because it is the law as enacted by Congress and tax officials are perfectly willing for taxpayers to take advantage of any relief to which they are legally entitled.

Even though a textile mill was not in business prior to 1936 it may reconstruct the 1936-39 profits upon the basis of prices for yarns and sales prices of hosiery which prevailed during 1925-28 or any other four-year period which was not higher than the average for 1918-38.

The important point and one which many will certainly overlook is that, if the application is not filed on or before September 15th, 1943, the 1936-39 average profits will prevail not only for 1940, 1941 and 1942 but for 1943 and all subsequent years.

In addition to relief rights under Section 722, it is important for a mill to make itself familiar with the other excess profits provisions of existing law. Even though it is not entitled to file a claim for relief under Section 722 it may be inadvertently increasing its excess profits tax load by failing to take advantake of deductions or adjustments to which it is entitled by other sections of the law. For example, if the "75 per cent formula" as provided in Section 713 (e) of the Internal Revenue Code, or the "growth formula" as contained in Section 713 (f), is applicable in the case of a mill, the failure to take advantage of such provision may cost the company a great many tax dollars.

It is not the purpose or desire of Congress that a company pay one dollar more in taxes than the law requires. A mill, no matter how small, should know the exact nature and limits of tax obligations so that it will pay only what is required.

Figures On War Contract Renegotiation Are Given

Renegotiations of war contracts by the price adjustment agencies of the War and Navy Departments and the Maritime Commission through June 30, 1943, resulted in commitments for the elimination of excessive profits in the amount of $3,555,174,000, according to a joint report issued recently.

The report emphasized that this figure does not include those savings secured through lower prices in successive contracts, not susceptible of accurate measurements or even an approximate estimation, but savings undoubtedly many times greater than the measurable recoveries and price reductions in existing contracts making up the figures here presented.

Of the total for the 14 months since the authorization of the three price adjustment boards and their associated agencies, $1,523,748,000 represented the recovery of excessive profits realized and $2,031,426,000 represents price reductions for future deliveries on existing contracts. The report did not, however, reveal how much of the money would have been refunded to the Government through tax channels.

Two Recent Patents in Textile Field

John C. Crocker of Ware Shoals, S. C., has received a patent on a picker stick check for looms in which the outer end of the check strap is pivotally secured to a bracket on the lay, and the other end is adjustably secured to the lay. The outer end of the strap has several layers unsecured to each other, thus giving greater wear. The outer end which is pivoted to the bracket extending from the lay has its lower edge riding on a cam surface which gradually stops the picker stick on its inward travel. The bracket also has an abutment which limits the inward travel of the outer end of the check strap. One-half interest in this patent is assigned to William D. Dodenhoff of Greenville, S. C.

Celanese Corp. of America has been granted a patent relating to a registering device which enables an operator to determine the effective spindle hours actually worked by a winding machine.

The invention covers a metering or registering device for automatically checking the operation of a winding machine having a plurality of spindles, in which each spindle has a switch that is open when the spindle is running and closed when it is not, and in which registering means are connected in turn with several switches at regular intervals and record on each occasion whether the spindle is running or not.

New Metallizing Catalog Now Available

The Metallizing Co. of America, 1330 West Congress Street, Chicago, pioneer manufacturers of metal spray equipment, have just published a new 40-page catalog which deals with all phases of the metallizing process.

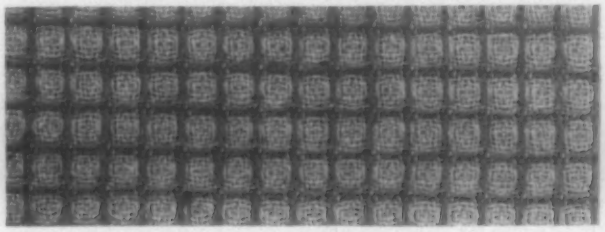
All information contained in the book is classified according to industry and covers every major field in which metallizing is today effecting economy in time and money in the maintenance and repair of costly and hard-to-replace equipment.

Practical Textile Designing

(Continued from Page 22)

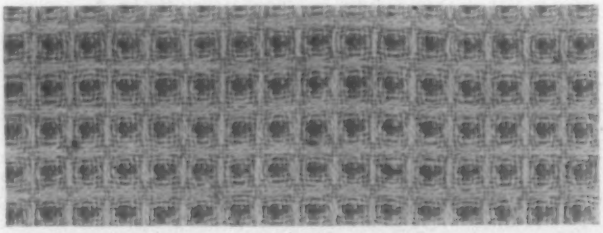
ranged ten yellow, ten white. Fig. 241 is the weave used in this fabric.

Fig. 240-B illustrates a suiting fabric made from two-ply 20 in warp and filling and using the same weave as Fig.



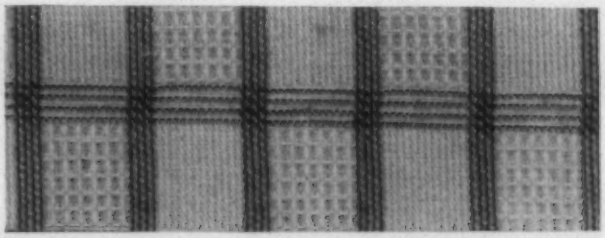
240-B

240-A. The ends and picks are arranged eight white, two blue, with the colored ends floating in the center of the weave to make the check effect.



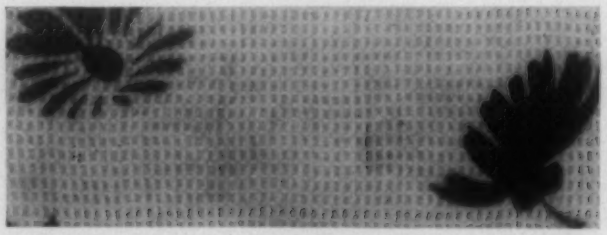
240-C

Fig. 240-C illustrates the reverse side of this fabric which shows a spot of color made by the blue ends and picks between the ridges or check effect. This gives the fabric two distinct effects, each equally suitable for a suiting.



240-D

Fig. 240-D illustrates a dress goods fabric composed of a small honeycomb weave and a fancy effect combined, with an overcheck of black and white.



240-E

Fig. 240-E illustrates a lightweight printed summer dress goods fabric. The weave used in this fabric is illustrated at Fig. 242.

Will Urge Plant Managers To Increase Training Facilities

Regional directors of the War Manpower Commission have been instructed to urge managers of war plants to provide more training facilities for persons already on their payrolls, Chairman Paul V. McNutt has announced. This action, he explained, was taken because reports received by the commission's bureau of training show a steady decline of enrollments in pre-employment courses, particularly in communities where labor shortages have become acute.

The bureau's reports show that at the end of April, 1942, there were 104,000 enrollments in pre-employment courses in public vocational schools, in April, 1943, only 49,000, and in the following month, 41,000.

McNutt said that while get-paid-while-you-learn training programs have existed in some establishments since industry turned to war production, many have been ineffectively handled. The new plan developed by the bureau of training will, he believes, prove more effective. He added that the need for more and better courses for men and women actually on the payrolls has now become apparent.

Regional directors have been instructed to work closely with plant managers in developing such programs and to assure them that in cases where they are needed vocational school teachers and equipment will be made available. The newer types of the planned employee training program, it was explained, may be set up in public vocational schools, in training centers or in the plant under the following conditions: the regional or area director of the War Manpower Commission determines that training is necessary to increase production in occupations essential to our war production, that there is no surplus of trained persons and that there is no assurance trainees for unpaid pre-employment courses can be secured. The War Manpower Commission official will then arrange for paid-training programs, using the public vocational schools or other centers, with the interested contractor or sub-contractor agreeing to pay the costs.

Trainees are men and women who meet the employment requirements. Training is given under actual or near-actual employment conditions, with comparable pay, and with the same materials, machines, tools and production jobs of the industry. The hours of work are the same as those of industry. Jobs for trainees are arranged in a carefully planned sequence so that they will progress from those tasks "easy" and "less easy" to those "increasingly difficult" and "difficult," without appreciable strain. Standards for the completed product are the same as those in the industry.

OBITUARY

HARRY B. LOGAN

Harry B. Logan, purchasing agent for the Lindale (Ga.) division of Pepperell Mfg. Co., died suddenly August 5 of a heart attack at his home.

Aside from his duties at the Lindale plant, with which he had been associated many years, Mr. Logan took an active part in Lindale civic affairs. Survivors include his wife and two daughters.

The Significance of Cotton Textiles To the Armed Forces

(*Continued from Page 24*)

You will find hospitals, doctors, the use of vitamin and salt tablets, home nursing and visiting. You will find a highly stepped up inetrest in improved sanitation. You will find mills adopting air changing, heat controls, humidity controls. Many of the mills are experimenting with rest periods. And all have a list of programs that have the purpose of bringing the worker to the job in a fit condition to do the job, and to do the job today, tomorrow and the day after.

Many mills have earned "E" flags, and as many more have earned the Minute Man "T" flag. So the operative as well as the management in this grand industry of ours has shot, and is shooting, both barrels at their responsibility towards the successful closing of this horrible war in which we find ourselves engaged.

I don't want to use up you fellows' time, but I do want to stop here to say that we, who are spinning and weaving, have learned that our life's path must travel along with the paths of the other cotton interests. If we have learned nothing else in the last few years, we have learned that we in the textiles have the same economic interest as the producer, as the crusher, as the ginner; that we have learned that we can in nowise thrive on low cost of raw material. The cost of raw material must be balanced in the cotton economy scales. We recognize that we are side by side together. And that the six interests are walking abreast, hand in hand. But this is another subject—but it is one that I would love to dwell on. More power to the council, and the bureau, and the other farming interests.

I think if you were to call Mr. Frank Walton of the WPB, he would tell you that the men in our industry have done their level best to get out pounds when he wanted them. Call up York Wilson and those fellows in the OPA and I think they will tell you that, whereas, we have had our differences, and have them now, that the management in the textile mills has put its whole heart into trying to work out unselfishly a program for fair ceiling prices.

I expect that right now more effort is being put into the problem of research as it affects cotton than ever before. Fuller Callaway is busy as he can be; Fess Blanchard of the Textile Research Institute is as busy as he can be. Dr. Murchison of the Cotton-Textile Institute and your own National Cotton Council, AATCC and others are doing everything they know to improve the uses of cotton and to carry cotton to new fields. Ed Lipscomb runs the scale when he uses the slogan, "Cotton, Tough as a Hide and Soft as Down." Your own Government is spending hundreds of thousands of dollars in research for new and better uses for the cotton fiber. Trade magazines have been magnificent. Men! We have got a lot of friends.

A few weeks ago I was in New York at a testimonial dinner for Admiral W. J. Carter, S.C., U.S.N., stationed on Governor's Island. I asked him the question: "Where, in the Navy does cotton go?" Of course, we know the sailor and the soldier eats cotton and he shoots it, but we are not talking about that. We are talking about what he wears, and what he uses with his hands, and what his ship uses, and what the things on his ship use. He gave me the following list:

"Airplane cloth, ammunition slings, anti-aircraft gun covers, bandages, bandoleers, balloon cloth, blankets, boat

covers, bunk bottoms, camouflage cloth, clothing, cold bags, deck awnings, flags, gas masks, gun covers, hammocks, hatch covers, hose racks, instrument covers, life bags, life preservers, mattresses, mattress covers, pillows, pneumatic rafts, sails, sea bags, sheets, stretchers, table cloths, tarpaulins, tents, water bags—and of all things—wind bags. Boy! the Navy sure needs cotton.

I have just talked to a marine colonel returned from the battle areas of Guadalcanal and he was high in his praise of how cotton combat clothes stood the gaff of that campaign.

When I wrote to Admiral Carter I also wrote to the Cotton-Textile Institute and asked them to give me a list of a few combat items that are made out of cotton. One of the items the institute named was a standard office made of water repellent canvas and provided with lightproof windows and other blackout features. This office can be set up quickly in the field and can be used to keep pace with an army on the move. I am happy to know about this office because we will be needing one. Because of all men the Government is sending down to our office for one thing or another—OPA men, tax men, renegotiation men, cost men, inspection men, and a heap of other men, there isn't any room in our office for me to get, so I am going to see if I can't get a priority on one of these cotton offices.

I have already told you about the arctic clothes used for the sailors. Now, here is a uniform for the snow-shoe troops made out of cotton. They are working with cotton for shoe leather. By the way, this is where the carpet manufacturers step into the picture. And have they done a good job! You have no idea what those fellows went through in changing from carpets to duck.

An item that amazes me is this: "In order to relieve the shortage of gasoline and fuel oil that has long plagued the Eastern seaboard, boxcars are being changed into tankers by the use of canvas bags.

And now think of this: Bedspread plants making pup tents. Dress factories making parachutes as well as cotton canvas covers for artillery, searchlights and munitions.

Woolen Army combat overcoats have been largely replaced by good cotton water repellent, hard wearing, wind resistant cotton cloth.

Folding picture frames made of cotton; cotton sleeping bags—more warmth less weight. Here is a cloth that is flame repellent and water resistant. It is a Navy "life jacket." Food bags for jungle troops—the soldier's food and clothing will keep dry under all weather conditions. And aren't you surprised to know this? That 15 square yards of cotton fabric are required in merely a sub-assembly of every airplane propeller. In a famed fighting plane, to all appearances all metal, more than 300 yards of cotton fabrics of various weights and constructions are used.

The moving finger writes on the wall of the banquet hall of the king, and this is what it writes: *mene wene tekel upharsin*. Intrepreted, this means: "You have been weighed in the balance and found wanting." Who was weighed in the balance and found wanting? Sporty old King Belshazzar. Today, another finger has written across the ceiling of the halls of the cotton industry. If you will let me read a little Persian I will read *mene wene untekel unharsin*, and I will say the interpretation is: "You are being weighed in the balance and found not wanting—and who is being weighed—a great big, fine old man—who, on a good, stiff rising beam weighs 500 pounds—Old Man King Cotton.

Many Arguments Passed Back and Forth In Rayon Tire Fight

A rootin'-tootin' argument has developed between Government officials and various cotton interests concerning the expansion of facilities for the manufacture of rayon tire cord, with the National Cotton Council being the main standard bearer in behalf of the South's major crop. Meanwhile, the rayon industry has kept comparatively quiet, letting the War Production Board do most of the talking for its side.

Considerable wrangling took place when the expansion plans were first publicized, but it was of comparatively minor nature until the Truman Committee, a United States Senate group which investigates all phases of the war effort, spoke out for cotton. The committee's report contended that Army tests which were conducted were misleading and that expansion of existing facilities was not absolutely necessary and at the same time represents poor management of money. The report was immediately challenged by Rubber Director William M. Jeffers and Undersecretary of War Robert P. Patterson.

On Aug. 9 the National Cotton Council demanded that the War Production Board respect the recommendations of the Truman Committee.

The statement specifically opposed a request pending before WPB that rayon cord production be expanded for the third time since the outbreak of war. Two expansion programs previously authorized by WPB would quadruple the output of rayon cord, and the request now pending would increase this production to eight times its prewar capacity, it was declared.

Restating the position of the National Cotton Council in the matter, Mr. Johnston said: "We have not asked, nor do we now ask, that cotton be accorded any special or 'favored' consideration. However, we do ask—in fact, we demand—that cotton be given a fair hearing before it is condemned and executed in the tire cord market by the Government of the United States.

"If, under normal, competitive, peacetime conditions rayon, through its own resources, was taking a substantial portion of the tire cord market away from cotton by legitimate business practices, cotton would have no complaint against anyone but itself. But this is not the case.

"Rayon is using the wartime powers and money of the Government of the United States to do for it during the war emergency what it was not able to do for itself in time of peace." Mr. Johnston added that at the beginning of the war, with "all of the millions of dollars spent on research and poured into high-powered advertising over a six-year period," rayon had succeeded in capturing only four per cent of the tire cord market.

"Notwithstanding this record, rayon now asks that the Federal Government divert from other vital projects in our war program thousands of tons of critical materials and hundreds of thousands of precious man-hours to the construction of plants that would produce enough high tenacity rayon to make nearly two-thirds of the total amount of tire cord that was being made before the war. Furthermore, the cost of all of this additional plant capacity would be paid for by the U. S. Government, although the plants would belong to the private companies."

The statement of Acting Secretary of War Patterson that

"the superiority of rayon for this purpose is common knowledge," was declared by Mr. Johnston to be "an absurdity." "The War Department," said Mr. Johnston, "with all its technical experts acquired from commercially interested private companies, never has been able to make up its mind why it thinks rayon is better.

"The first excuse advanced was that rayon cord was thinner and hence would save rubber. The cotton industry, in co-operation with tire manufacturers, promptly produced a thinner cotton cord that saved as much, and in some instances more, rubber than the rayon cord. The next excuse was that tires made from this new, thinner cotton cord might not perform satisfactorily in actual use, but tests by the Army's own Motor Transport Corps soon eliminated this contention. The rayon advocates then developed a third theory: that since all tires were going to have to be made largely from synthetic rubber, and since synthetic rubber generates more heat than natural rubber, rayon cord would be necessary in synthetic rubber tires because rayon cord could stand higher operating temperatures than cotton cord."

During this time, Mr. Johnston said, the first program to double rayon cord production had been approved by WPB, and a second program to quadruple pre-war production had been requested. Despite the protests of the cotton industry that no tests had proved the theory that rayon better withstood higher operating temperatures, the second expansion program was authorized, Mr. Johnston stated.

Touching briefly on the economic effect of continued expansion in rayon cord production, Mr. Johnston reminded that prior to the war the tire cord market represented the largest domestic consumer of cotton. The loss of this market, or any appreciable part of it, would be serious to the economy of the cotton industry, the cotton belt, and the nation, he added.

After the National Cotton Council statement had been made, reports were still current in Washington that Jeffers and Patterson had the ear of WPB officials and would soon receive final approval of their expansion plans.

Ribbon Manufacturers Association Dissolved

The Ribbon Manufacturers of America, Inc., the trade association of the ribbon industry, its secretary and 13 of its members were fined a total of $41,000 Aug. 6 by Judge Vincent L. Leibell in New York City after pleading no contest to a criminal information charging attempts to monopolize the ribbon industry and to fix prices.

The attorney for the defendants, who have offices in New York City and do business in New York, New Jersey, Pennsylvania and Maryland, said they had agreed tc dissolve the association. The information charged the defendants controlled a major portion of ribbon business in the United States.

Vat Dyeing Spun Rayon and Blends Of Cotton, Wool and Acetate

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freedom from turning yellow and formation of odor which is troublesome complaint on chlorine bleached goods.

Listed below are some of the precautions necessary for obtaining uniformly bleached goods by the peroxide bleaching formulae listed previously in this article.

1. Removal of all boil off chemicals, desizing compounds, through thorough hot washing before starting of bleach.
2. All sizing agents must be thoroughly removed or highly solubilized before entering the goods in peroxide bleach bath as sizing compounds diluting a peroxide bleach bath interferes with its full bleaching action.
3. The water supply must be free of iron, aluminum and other troublesome metallic agents, as they may cause spots on the bleached goods which may be tendered places in the goods.

Zeolite softened water is the most desirable water supply to use. If the water is hard (calcium and magnesium salts) then for each bleach bath the water should be softened by adding the required amount of phosphate (calgon) or fatty alcohol to the bath before the bleaching agents are added.

Checking Bleach Bath

For peroxide bleaching baths, the plant chemist and dyer should set a standard method for the laboratory to check each bleach bath or as many as possible on these points:

1. Take sample of prepared bath ready to start bleaching operation.
   (a) Take pH reading on glass electrode or colorimetric pH apparatus.
   (b) Run determination as to amount of available hydrogen peroxide.
2. Take samples of bleach bath on completion of bleaching operation and repeat tests (a) and (b), (pH and amount of hydrogen peroxide remaining in bath).

These tests used as reference notes for the party in charge of supervising the bleaching will enable him to obtain uniform results and locate poorly prepared bleach baths before the operative is able to finish up goods and have it dried ready for dyeing.

The best working pH range for spun rayon and cotton goods is around 9.8 to 10.6; while on acetate-wool-spun rayon constructions it is best to keep the pH down to 8.4 or 9.0. Some plant officials want their dyers and chemists to squeeze all the money value possible out of a peroxide bleaching by using the highest temperature and pH value possible as well as shortest period. But by doing this, a dyer will abuse the most valuable points obtainable through peroxide bleaching, that of uniformity and thoroughly penetrated goods most suitable for vat, napthol or any type of pad dyeing operation. It is most desirable to give extra amounts of hydrogen peroxide, less alkali (sodium silicate and ammonia), lower bleaching temperatures and slightly longer bleaching periods, as these extra precautions help give the most practical and economical costs to a plant over a long operating period.

Government Estimates 1943 Cotton Crop At 12,588,000 Bales

The Agriculture Department reported Aug. 9 that the 1943 cotton crop indicates an all-time record yield of 279.4 pounds of lint cotton to the acre, compared with 272.5 pounds last year, which was a record yield.

The acreage for harvest this year is about a million acres less than harvested last year, but production, the department reported, is indicated as 12,558,000 bales of 500 pounds gross weight. That is only 266,000 bales less than produced last year, and 84,000 bales more than the average ten-year (1932-41) production.

The Census Bureau issued simultaneously its first ginning report of the season showing that 108,653 running bales of lint cotton, counting round as half bales, had been ginned to Aug. 1. Ginnings to that date last year totaled 48,626 running bales. Two years ago the total to that date was even less.

Production of cotton last year was 12,824,000 bales of 500 pounds gross weight, in 1941 it was 10,744,000 bales, and the average production in the ten years, 1932-41, was 12,474,000 bales.

The area of cotton in cultivation on July 1 was 21,995,000 acres, compared with 23,302,000 acres a year ago, and 29,508,000 acres, the 1932-41 ten-year average. Allowing the 2.0 per cent ten-year, 1932-42 average abandonment from natural causes from July 1 to time of harvest, would leave 21,576,000 acres for harvest this year, compared with 22,602,000 acres harvested last year, 22,236,000 acres two years ago, and 26,389,000 acres, the 1933-42 ten-year average harvested acreage.

The condition of the cotton crop on Aug. 1 was reported at 79 per cent of a normal, compared with 79 a year ago, and 72, the ten-year, 1932-41, Aug. 1 average.

The condition on Aug. 1 indicates a yield of 279.4 pounds of lint cotton to the acre, compared with 272.5 pounds produced last year, and 217.0 pounds, the 1932-41, ten-year average yield.

Textile Chemicals To Be Handled

Habow Chemical Co., Conover, N. C., which has been manufacturing sanitary chemicals as Habow Chemicals, Inc., has added a textile chemical department and announces that its research laboratory is now open for the use of customers.

W. F. Biggers, who operates the company in partnership with his wife, studied textile engineering and chemistry at Georgia School of Technology and later was employed by Moreland Chemical Co. of Spartanburg, S. C. Other experience was gained by working as manager of A. C. & M. Co. at Anderson, S. C., which handled many chemical problems for South Carolina textile mills.

Steel Heddle Workers Buying Bonds

The entire working force at the Greenville, S. C., plant of Steel Heddle Mfg. Co. is participating in the payroll allotment plan and 10 per cent of the gross payroll is being invested in war bonds, according to a recent announcement. The firm and its employees have been congratulated by Ellis M. Johnston, chairman of the Greenville County war savings staff.

Sonoco Products Go To War

(*Continued from Page 12*)

one of the first companies in South Carolina to be awarded the Treasury Department's Minute Man Flag. Approximately 20 per cent of those employed at the beginning of the war are now serving in the armed forces. Those who are left behind recently formed a labor-management committee as part of the War Production Drive. This committee meets regularly to consider various suggestions and ideas from executives and workers as to methods of improving and hastening output.

This vast business enterprise gets its name from a company organized in 1899—the Southern Novelty Co., Hartsville, S. C. Major James L. Coker was its first president. Returning from the War Between the States, Major Coker went into the cotton business, then became a paper manufacturer. Under the name Carolina Fibre Co., Major Coker's paper mill at Hartsville, his home town, made kraft and similar stocks out of pine. Later he also opened a cotton yarn mill at Hartsville. The need for yarn carriers—cones and tubes—led the Major to form the Southern Novelty Co. and manufacture these products for himself and others in the textile industry.

To make cones and tubes of paperboard was relatively new to the trade; wood was the accepted material. But disposable paper cones and tubes would reduce costs to the cotton mills. Raw material was supplied by the Major's Carolina Fibre Co. mill. At first the paper cones were hand made. Then W. F. Smith, production manager of the company, invented an automatic cone-making machine. The company's sales manager, Charles Westfield Coker, son of the Major, sold paper cones in such large quantities that a new mill had to be built to supply the demand. Cone designs were improved. Machines to burnish the cone tips were installed. Like the cone-making machines, they were built in the plant of the Southern Novelty Co. Then came more plant additions.

In 1918, when the Major passed away at 81, Charles Westfield Coker became president. He expanded the plant, adopted the brand name Sonoco in 1924 and changed the company name to Sonoco Products Co. Then came further expansion, starting with the addition of the Rockingham plant in 1927. The velvet surface was introduced at that time. Dytex cones and tubes soon followed. After Charles Coker passed away in 1931, a son, James L., became president, a position he holds today.

DuPont Predicts Wide Post-War Uses of Synthetic Resins

Necessities of war mothered the Army's plastic raincoat, but it has proved so successful that synthetic resins will permanently replace rubber in coated fabrics for many post-war products, according to the plastics department of E. I. duPont de Nemours & Co.

When supplies of natural rubber from the Far East were cut off, the plastic which had been used as the "sandwich" in laminated automobile safety glass was quickly adapted to coat fabrics for Army raincoats and other military articles.

The synthetic resin coatings for fabrics equal or surpass rubber in wearing qualities, and are lighter in weight. They resist air, sunlight, oil and grease much better than the natural product, and they even remain flexible in sub-zero temperatures.

The success of the plastic—"Butacite" polyvinyl acetal resin—on fabrics for Army raincoats led to its use also for Marine ponchos, water-proof and water resistant suits for seamen, life rafts and belts, sleeping bags, tents, hospital sheeting, water and food bags and numerous other articles of military importance.

Most of these products, which are equally as useful in peacetime as wartime, and many new civilian products will be made from plastic-coated fabrics after the war, even though natural rubber is again plentiful. Laboratories, incidental to their war work, already have developed some new civilian goods.

The vinyl resin family, of which "Butacite" is a member, is replacing 22,000 tons of crude rubber a year in the war program.

Almost half of the gross sales of E. I. du Pont de Nemours & Co. for the year 1942—46 per cent to be exact—consisted of products which either did not exist in 1928 or were not then manufactured in large commercial quantities.

This figure does not include sales of newly-developed products which are still under the veil of military secrecy.

A long list of products makes up the large volume of sales involving relatively new developments. Outstanding among them are nylon, "Ponsol" vat dyes, acetate rayon, and "Cordura" high-tenacity rayon.

Once the war is over and normal production is again resumed, it is probable that the 46 per cent figure will show a continued rise, due in part to the introduction of new things developed in the laboratories and to the greater peace-time demand for many relatively new items.

Rayon Deliveries for July Continue At High Pace

Shipments of rayon filament yarn to domestic consumers continued at a high pace during July, aggregating 39,700,000 pounds, according to figures compiled by *Rayon Organon*, published by the Textile Economics Bureau, Inc. The July total compared with 39,600,000 pounds shipped during June and with 39,900,000 pounds shipped during July, 1942. For the seven months to July 31, 1943, shipments aggregated 282,200,000 pounds as compared with 271,300,000 pounds in the corresponding period last year, an increase of 4 per cent.

Rayon staple fiber deliveries to domestic consumers aggregated 12,500,000 pounds during July, 1943, as against 13,300,000 pounds shipped in June and 12,600,000 pounds shipped in July, 1942. Staple fiber deliveries for the seven months to July 31, 1943, aggregated 91,200,000 pounds as compared with 88,400,000 pounds shipped in the corresponding period last year, an increase of 3 per cent.

Stocks of rayon filament yarn in the hands of producers totaled 6,100,000 pounds on July 31, 1943, as compared with 6,500,000 pounds held on June 30, and with 6,500,000 pounds held on July 31, 1942. Staple fiber stocks held on July 31 totaled 3,200,000 pounds compared with 2,900,000 pounds held on June 30, and 3,100,000 pounds a year ago.

Production of rayon yarn and staple fiber by American mills during the first half of 1943 amounted to 323,800,000 pounds, states the *Organon*. This total, the largest in the history of the rayon industry, compares with production of 321,500,000 pounds reported for the second half of 1942.

Rayon filament yarn production during the six months ended June accounted for 245,100,000 pounds of the total output. This compares favorably with the output of 234,800,000 pounds for the same period in 1942 and the 218,200,000 pounds produced in the first half of 1941. Staple fiber production accounted for the balance of the total.

For the quarter ended June 30, rayon filament yarn production totaled 123,600,000 pounds, an increase of 1.7 per cent as compared with a total of 121,500,000 pounds reported for the March 31 quarter. Viscose cuprammonium yarn production in the June quarter attained an all-time high of 84,400,000 pounds or 5.8 per cent higher than the 79,800,000 pounds reported for the first quarter. Acetate yarn output totaled 39,200,000 pounds for the second quarter, a drop of 6 per cent as compared with the first quarter.

Rayon staple fiber production for the second quarter of the year totaled 39,800,000 pounds which represents an increase of 2.3 per cent compared with first quarter output of 38,900,000 pounds.

Stein, Hall Building Charlotte Warehouse

Stein, Hall & Co., Inc., textile starch manufacturing concern, has completed plans for construction of a warehouse at 1622 West Morehead Street, Charlotte, N. C. The building will cost approximately $8,000, will be one story high with concrete floor, brick walls and wood roof frame.

The warehouse is being built in order that Stein, Hall may better serve its customers in this territory. Ira L. Griffin is Southern division manager for the company.

Georgia Charter Is Given To Textile Education Foundation

The Textile Education Foundation, Inc., has been granted a State of Georgia charter by Paul S. Etheridge, judge of the Superior Court, Atlanta circuit. Those who filed the petition are Scott Russell, A. B. Edge, Paul McKinney, Frank William, Ashley Jewell, Neil Hamilton, Gay Parmenter, Harrison Hightower, Mac Cheatham, Marshall Stone, Julian Strickland, William Banks, Ted Forbes, Julius Scott, Sam Swint, W. E. Beldon, Otis Ball, L. G. Hardeman, Jr., and Barnard Murphy.

The corporation, the petition states, is "exclusively for charitable, scientific, literary and educational purposes, and no part of its earnings shall inure to the benefit of any private shareholder or individual and no substantial part of its activities shall be for carrying on propaganda or otherwise attempting to influence legislation.

"The corporation is formed for the purpose of aiding and promoting, by financial assistance or otherwise, from the income and principal of its assets, all types of textile education and research at any educational institution or institutions which have the status of charitable or educational institutions to which gifts may be made that quality as charitable or educational gifts under the United States Internal Revenue code.

"The corporation shall have the power to receive gifts, bequests and devises, and to purchase, own, hold and sell real and personal property of every kind and character, to pay in full or to supplement the salaries of members of the faculty of such institutions which are engaged in such work of textile education or research; to donate all or any part of the equipment, plant, facilities and materials incident to such textile education or research, to make gifts to such institutions for the endowment of such educational research and to do any and all things that may seem proper to promote and improve textile education and research at any such institution. The corporation shall be a non-profit charitable and educational corporation."

There is no capital stock and "shall be no profit or benefit of any kind or character to any member of the corporation."

The government of the corporation shall be vested in its members, consisting of the applicants for this charter and of those persons, firms or corporations that make gifts to the corporation.

In the government of the organization, each member will have one vote for each sum of $100 contributed and paid by the member to the corporation. Fulton County is the principal office designated with the privilege of establishing branch offices and places of business elsewhere.

Centrifugal Humidifier Is Described

Bulletin No. 327, describing the Centrifugal Humidifier, was published and distributed recently by the Bahnson Co. of Winston-Salem, N. C. The Bahnson Centrifugal Humidifier is a result of over 30 years of development and experience and is widely used throughout the textile industry in this country and abroad. According to the bulletin, the humidifier incorporates in one self-contained unit the following desirable features: economy of installation, economy of operation, economy of maintenance, flexibility of installation, flexibility of control, and simplicity of design.

It's Something — — — Carl Rudisill's Employee Program

(*Continued from Page 16*)

sibly need, on a greatly magnified scale. Down one entire side of the room run the electric stoves; and it is possible to prepare a meal for 300 persons at a time in the club kitchen; also there are dishes and cutlery for more than that number on hand.

Throughout the year the Carlton clubhouse is the scene of many dances, parties and social gatherings with an especially elaborate celebration, of course, during the Christmas season. Here under one roof is a complete setting and background for the social and cultural life of a privileged group of workers, a people who combine work, play and sports in the correct proportions.

Carlton clubhouse and its offspring, Camp Rudisill, present to the world tangible evidence of the vast progress being made in the great textile communities of the South under the leadership of far-seeing and public spirited men like Mr. Rudisill. Though comparatively few years have passed since he began devoting his energies to community projects, the good results achieved are many and beneficial to all concerned; for it is proverbial that contented workers are efficient workers and that kindness begets kindness. Such is the spirit of this model mill community in the heart of the vast textile region of the Carolinas.

Cotton Cases for Field Telephones

Cotton fabric has been substituted for leather in the manufacture of carrying cases for field telephones, the War Department announced recently.

Because of its weight and the rough treatment it receives during battle operations, the field telephone has heretofore been carried in a heavy leather case. But with the growing need for conserving this type of leather, Signal Corps procurement officials several months ago began casting about for a suitable substitute.

After experimenting and testing at the Signal Corps laboratories at Fort Monmouth, N. J., a cotton carrying case was evolved that not only has the strength of leather but in some respects is superior.

An average civilian consumes 20 pounds of cotton a year. The Army Quartermaster Corps must have more than ten times more for the average American soldier.

War Plants Are Requested To Operate On Labor Day

WPB Executive Vice-Chairman Charles E. Wilson has called for full schedules of work in all war plants on Labor Day, Sept. 6, and asked labor and management to work together on that day to top all previous records.

Mr. Wilson also said that the Army, Navy and Maritime Commission joined in this request. His statement follows:

Mr. Wilson's statement follows:

"To get out the munitions our men need in the battle areas, it is imperative that all producers of war materials operate full schedules of work on Labor Day, Sept. 6.

"I am therefore asking management and workers to devote labor's traditional holiday to the job of hastening the downfall of the Nazi and Nipponese enemies of free labor and free management.

"This request is made with the unanimous approval of the production executive committee, consisting of Army, Navy, Maritime Commission, and War Production Board officials.

"About two million members of organized labor are now in the fighting forces, and most working families have sons, brothers, fathers or husbands in the armed forces. In tribute to them and to the traditions of free labor, we must aim at and achieve 100 per cent production of munitions of all sorts on Sept. 6.

"The fact that we have begun to dent the armor of the Axis is added reason for harder work on the production line. We must get enough munitions to our men so that they can push through whenever they open any cracks on the Axis front. The more we can produce now, the smaller will be the cost in American lives.

"Vice-Chairmen Joseph D. Keenon and Clinton S. Golden join with me in urging that management and labor in all war plants make arrangements now to have everyone on the job Labor Day. To assure that result, details should be worked out without delay through collective bargaining agencies wherever they exist. The joint aim in every plant should be to top all previous records, producing for attack. Labor-management committees should also plan fitting observances of Labor Day in such a way as to stimulate the production of arms for victory."

Cotton canvas and burlap, sewed into scale model landscapes perfect in every detail, are used by the Royal Air Force in planning military air maneuvers.

Wool Supply Expected To Take Care Of All Needs

In line with Donald M. Nelson's six-point program to makes clothes rationing unnecessary, wool manufacturers are sacrificing novelty to step up the production of staple items, the War Production Board said recently.

Concentration on the most widely used apparel fabrics will mean less variety, but more yardage. At present, apparel wool output for civilians is approximately the same as last season—at the rate of about 240 million yards a year. If military requirements do not exceed current estimates, future increases in yardage will be civilian increases.

More goods can be produced only through more efficient use of manpower and facilities, as there are neither spindles, looms, construction materials nor workers for factory expansion. To meet military demands and equip civilians, existing wool facilities will be operated to the limit of capacity.

In the production of wool goods, the tightest bottlenecks are at the combing and spinning stages. To overcome this difficulty, manufacturers are reducing the variety of colors and counts of their yarns and then running larger lines. This adds up to less variety but more quantity, with no reduction of quality.

Materials produced will be familiar, popular and practical types. No colors are prohibited. No plaids, stripes or fancy weaves are banned. In consultation with WPB, wool manufacturers decide how materials, labor and equipment can be adjusted to make more essential goods for the civilian requirements program. A color or construction is eliminated for the duration only when total output can be increased as a result.

Production demands are unprecedented. In 1942, more wool was used for military purposes alone than the entire country had ever consumed in a single year. Military orders are still enormous; during his first year of service a soldier needs 75 pounds of wool in the form of clothing and blankets. Maintainance and replacement of military items also occupies a large part of the wool industry.

No longer on the critical list, raw wool is in supply adequate for all known military and civilian needs. However, this favorable factor could be reversed if changing war conditions cut off foreign imports. The Government stockpile, carefully built up last year, holds more than 700 million pounds of raw wool in readiness for such an emergency.

There will be no wartime return to the less essential uses of wool. WPB's six-point program stresses the allocation of materials to essential goods. To assure the adequate distribution of these essentials, stores are asked to tone down promotion and consumers requested to buy only what they need.

American Textiles Shown in England

The British Cotton Board's exhibition of American textiles in the Manchester Color Design and Style Center attracted wide attention recently.

The *Manchester Guardian* said the exhibit was "admirably arranged and displayed."

The show included American dress materials, shirtings, furnishings, industrial cloths and materials treated with plastics.

Mississippi State Fair To Feature Cotton's Role in War

Cotton's role as the second most essential material of war will be graphically portrayed for the half million visitors at Mississippi's Free State Fair, October 11-16. The Army Quartermaster Corps has notified the National Cotton Council that arrangements have been completed to show the QMC's 18-unit cotton war exhibit at the Fair.

Showing a representative selection of the 11,000 cotton items used by America's fighting men, the exhibit will dovetail closely with the fair's theme, "Mississippi Goes to War," since that state is the nation's largest producer of long staple cotton. A majority of the cotton equipment used by the Army is fashioned from long staple fibers, and the Quartermaster Corps, through the display, will show Mississippians how important their cotton production is to America's war effort.

A part of the dramatic Army War Show which toured major cities of the nation last year, the exhibit has been seen by millions of persons. Each unit is equipped with special lighting devices and pictures some particular phase of military life or action in which cotton is used. In a separate section of each unit is shown an actual sample of the cotton equipment used in each phase of activity. Reproduced are uses of cotton in apparel, parachutes, pontoons, tarpaulins, tropical equipment, arctic uniforms, tenting, combatting gas attacks, carrying ammunition, and for many other purposes.

The exhibit was prepared for the QMC through the cooperation of the National Cotton Council and the Cotton-Textile Institute at the invitation of the Quartermaster General. It will be only one of numerous military displays and demonstrations planned for the fair at Jackson. Representatives of the Army, Navy and Marine Corps already have been assigned to work with officials of the fair in arranging other military exhibitions.

More "Avisco" At Lower Cost

The entire manufacturing facilities for making viscose rayon staple fiber at the Front Royal, Va., plant of American Viscose Corp. have been converted to production of "Avisco," the company's extra-strength staple fiber, it was announced recently. This development is in line with the steady increase in the strength properties of all major types of rayon.

"Avisco" is used in a very wide range of products including men's shirts, underwear, pajamas, sports clothing and hosiery; women's dress fabrics and woven and knitted underwear; men's and women's spun rayon handkerchiefs; babies' extra-soft highly-absorbent diapers, and many other consumer articles in which durability and a high degree of serviceability are required.

Coincident with the increased production of "Avisco," the price has been reduced from 26 to 25 cents a pound. The new price is the same as that which formerly held for the standard type. The price of the latter was similarly reduced 1 cent a pound to 24 cents.

The aim of American Viscose Corp. in increasing production of its extra-strength staple fiber at this time is to make available in commercial quantities to the textile trades a fiber that will provide greater intrinsic value and serviceability in consumer merchandise.

Booklet Deals With Problems of Foremen

The solution of one of the perplexing problems of industrial management, namely, teaching foremen their responsibilities, has been given a real boost by the appearance of a new text book, "Foremanship and Accident Prevention in Industry," published by American Mutual Liability Insurance Co. of Boston. As the title implies, this 94-page book is designed to teach foremen accident prevention but it is arranged to fit nicely into any foreman's over-all training course.

The book is especially valuable at this time because the need is great for training of a large number of new men placed in the position of foremen and the further schooling of foremen of long experience. Because the responsibility of foremen for the control of accidents within their departments has come to be recognized as the key to the success of the plant accident prevention program, the foreman's accident control duties should have a proper place in foremanship training.

While the primary purpose of the book is to give the industrial policyholders of their own company an added safety engineering service, sample copies are being made available upon request to the executive of any plant engaged in war work, because this constructive aid in the prevention of accidents is of outstanding importance to the war effort.

Small Plants May Use Enemy Patents

Enemy patents, seized as a result of the war, and now in possession of the Alien Property Custodian, have been made available to the operators of small war plants, it has been announced by Robert W. Johnson, chairman of Smaller War Plants Corp., whose office has worked out the details with Leo. T. Crowley, alien property custodian.

Up to recently only larger firms have reviewed available alien patents and have applied for non-exclusive licenses under which the war effort and post-war development may be implemented.

Small plants were urged to take advantage of this opportunity and were encouraged to apply to the office of the custodian for an index of classified patents which will enable them to select such patents as may interest them.

"The issue of the patent papers, drawings and specifications by the custodian," SWPC said, "then enables the applicant to determine, in his own plant, the value to him of those available."

It was emphasized that small plant operators do not have to go to Washington for this information. It can be secured by writing to the Office of the Alien Property Custodian at Washington or Chicago.

Once licensed under an alien patent, small plants will get technical assistance through any one of several Government agencies. SWPC will certify qualified firms and in some cases, where required, will assist in financing.

About 40,000 patents and patent applications have been vested by the alien property custodian and are available for license immediately.

Cotton insulating yarns are being used in radar, the new device that is so successful in locating enemy aircraft and naval vessels. Sales of yarn for this purpose have been made recently on high priorities, it is reported.

Wage Increases Are Granted To 6,400 Textile Workers

Wage increases for approximately 6,400 textile workers in Virginia, North Carolina and Tennessee have been authorized by the fourth regional War Labor Board at Atlanta, Ga., to bring minimum rates in the applicant mills up to 47½ cents an hour.

Regional Chairman M. T. Van Hecke said the increases, one cent an hour for a majority of the workers, were in line with a policy established by a decision of the national board in the case of 11 Southern textile mills.

Most of the workers affected by the regional decision were in the textile area of Spray, N. C., where approximately 4,200 benefited. Others were employed at Fieldale, Va., Wadesboro, N. C., and Knoxville, Tenn.

Approximately 4,700 employees of Marshall Field & Co. at Spray and Fieldale were given the cent an hour increase, Van Hecke said, while workers who had been on the payrolls since Nov. 7, 1942, were given cash bonuses of $3.33 and a cent an hour for each hour worked during the period of March 18 to Aug. 2, in lieu of retroactive pay.

A cent an hour increase was given 312 employees of Spray Cotton Mills and 140 workers at the Morehead Cotton Mills, both located at Spray.

Increases of three cents an hour were permitted for 836 employees of Cherokee Spinning Co., Knoxville, Tenn., to bring the minimum rate up to 47½ cents an hour.

In a related decision, the Southeastern board authorized new rate ranges at Anson Mfg. Co., Wadesboro, N. C., which will permit increases averaging five cents an hour for 250 workers now receiving 40 to 53 cents. However, the increases must be individual merit raises instead of blanket increases, Van Hecke pointed out.

Employees in the Marshall Field and Spray mills were represented by the United Textile Workers of America.

To Study High Grade Cotton Situation

Presidents of state, regional and national cotton organizations gather at Memphis Aug. 16 to launch an intensive program to relieve critical shortages in the supply of high grade cotton for war purposes.

Officials representing all six branches of the industry in 15 states have been called in by Oscar Johnston, president of the National Cotton Council, in response to an appeal by War Food Administrator Marvin Jones for co-operation in obtaining a greater percentage of high grade cotton from the 1943 crop. "The decline in grade is startling," said Mr. Jones in a letter received by Mr. Johnston recently. "The average grade of the last two cotton crops was the lowest on record."

Starch From Sweet Potatoes

In connection with the current shortage of industrial starch, reports from Ellisville, Miss., indicate that progress is being made in developing starch from the common sweet potato. Those connected with the Mississippi State Experiment Station at Ellisville assert the sweet potato product has been found superior for many purposes.

Southern Textile Association Celebrates 35th Anniversary This Month

"Thirty-five years is a long time." So states the latest issue of *S. T. A. News Letter* in remarking on the founding of the Southern Textile Association in August of 1908. In commemorating its 35th anniversary the association bulletin presented a condensed history of the association, parts of which are presented below.

While it was in the process of being formed in the early summer of 1908 the Southern Textile Association nearly became an organization made up exclusively of textile mill overseers—or in other words, an overseers' union. Three men, David Clark, George F. Escott and E. E. Bowen, took the position that the purpose of such an organization should be solely for education. At the first meeting in August, 1908, these three men succeeded in convincing those present that mill superintendents should be admitted to membership and that education should be the theme. H. H. Boyd of Charlotte, N. C., acted as chairman of the meeting, and T. F. Cuddy as secretary. J. A. Dean of Spray, N. C., was elected president, but the purposes of the organization had been so completely changed that he lost interest and never again attended a meeting. At a later meeting Neil T. Brown, then superintendent of Pilot Mills Co., Raleigh, N. C., was named to fill out the unexpired term. David Clark was elected the first treasurer and E. E. Bowen, secretary.

The new organization held its first scheduled meeting October 23 and 24, 1908. Quarterly meetings were held in the beginning, later three meetings a year, then two a year, and finally one meeting of the entire membership every 12 months. All of the first meetings were featured by prepared addresses, and there was seldom any information presented or discussion of practical mill problems.

Two men, F. Gordon Cobb and Marshall Dilling, are given credit for contributing the most to the Southern Textile Association's 35 years of worthwhile existence. F. Gordon Cobb conceived the idea of securing, through questionnaires, the opinions of superintendents and overseers on practical subjects. He gave unselfishly of his time in compiling the answers to the questionnaires and giving the composite results to the organization. Marshall Dilling was the originator of the divisional and sectional meetings at which discussions on practical subjects were developed and carried on through the years. F. Gordon Cobb led the first technical meeting, a carders' session at Charlotte.

The discussions in divisional meetings created a demand for some organization under which tests could be made to determine the solution of mill problems, and as a result a sister organization, The Arkwrights, was established. Membership in The Arkwrights was limited to those who were responsible for the satisfactory completion of some form of textile research. The Southern Textile Association was also very influential in establishing the Southern Textile Exposition.

The South's textile mills owe much to the Southern Textile Association, and many an idea developed at some meeting of the organization has resulted in money saved, better operations and more satisfied workmen.

Taylor Instrument Companies Honored With Army-Navy "E"

An Army-Navy "E" was awarded recently to Taylor Instrument Companies, Rochester, N. Y., for "accomplishing more than once seemed reasonable or possible" . . . in the words of Undersecretary of War Patterson.

Milton J. Cross was master of ceremonies for the event which featured the pennant-award speech by Colonel John A. Rogers, executive officer of the Surgeon General's Office, U. S. Army, and the pin presentation was made by Captain Claude W. Carr (M.C.), U. S. N., medical officer in command of the Naval Hospital, Sampson, N. Y.

L. B. Swift, president of the company, accepted the "E" flag and pledged the organization to ever greater effort in producing instruments for winning the war. Elmer C. Hursh, president of the Taylor Fellowship Club, accepted the "E" pin from Captain Carr in behalf of the employees. Captain Carr was assisted in the pin presentation by Staff Sergeant George Williams, tail gunner of a Flying Fortress, who won the Purple Heart and Air Medal for shooting down two German planes even though he himself was severely wounded.

Taylor workers and their families crowded into the Eastman Theater to be lauded for their quantity and quality production of blood pressure instruments and clinical thermometers for the medical units of the armed services, barometers for the U. S. engineers, compasses for the personnel of the Army, Navy and Air Corps, thermometers and pressure gauges for the Navy, an dall kinds of controlling and recording instruments for the synthetic rubber, high-octane aviation gasoline and chemical industries. Taylor is among the few firms in the country whose diversified line goes to almost every branch of the armed services as well as to the most critical industrial war plants.

WMC Checking N. C. Industries

A crew of representatives of the War Manpower Commission has begun a canvass of employers in North Carolina to determine whether or not they are complying with the provisions of the WMC employment stabilization plan in operation in the state and region since May 15.

Dr. J. S. Dorton, WMC director in North Carolina, announced that the members of the crew are canvassing areas on a prepared schedule by visiting the offices of plants with essential and other than essential employers and checking their payrolls to see if workers added since May 15 have been employed in accordance with the provisions of the labor stabilization plan—specifically that they have statements of availability for all workers hired whose most recent previous employment was in an essential activity.

This canvass was undertaken because of frequent reports that employers are not complying with the provisions of the stabilization plan either because they do not understand it, or wilfully, Dr. Dorton stated. The investigation is to continue until the entire state has been covered and all types of employers checked.

A cotton hammock and shelter used by American troops in the tropics has a cloth roof for protection against rain or hot sun. Enclosing walls of mildew-proof mosquito bars are operated with a combination zipper from either within or outside the hammock.

SOUTHERN SOURCES OF SUPPLY

FOR EQUIPMENT, PARTS, MATERIAL, SERVICE

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

ABINGTON TEXTILE MACHINERY WORKS, Abington, Mass. Offices at Boston, Mass., and Charlotte, N. C.

ACME STEEL CO., 2838 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 603 Stewart Ave., S.W., Atlanta, Ga., F. H. Webb, Dist. Mgr. Sou. Sales Reps.: C. A. Carrell, 523 Clairmont Ave., Decatur, Ga., Phone Dearborn 6267; K. J. Pedersen, 301 W. 10th St. (Tel. 2-2903), Charlotte, N. C.; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn., Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La., Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

AKRON BELTING CO., THE, Akron, O. Sou. Reps.: Ralph Gossett and Wm. J. Moore, 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S. 2nd St., Memphis, Tenn.

ALLEN CO., 440 River Road, New Bedford, Mass. Sou Repr.: L. E. Wooten, Fort Mill, S. C.

AMERICAN BLOWER CORP., P. O. Box 58, Roosevelt Park Annex, Detroit, Mich. 7 N. 6th St., Richmond, Va.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Room 714, 101 Marietta St. Bldg., Atlanta, Ga.; Room 309, Jahncke Bldg., 816 Howard Ave., New Orleans, La.; 619 Texas Bank Bldg., Dallas, Tex.; 312 Keller Bldg., Houston, Tex.

AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, Wilkinson Blvd., Charlotte, N. C., Hugh Puckett, Sou. Sales Mgr. Reps.: John D. Hunter, E. H. Driver, Paul F. Haddock, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

AMERICAN VISCOSE CO., 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C. Harry L. Dalton, Mgr.

ARKANSAS CO., Inc., P. O. Box 210, Newark, N. J. Sou. Repr.: Jasper M. Brown, 1204 Greenwood Cliff, Charlotte, N. C.

ARMSTRONG CORK CO., Industrial Div., Textile Products Section, Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley, Sou. Dist. Mgr.

ARNOLD, HOFFMAN & CO., INC., Providence, R. I. Sou. Headquarters: 1211 McCall St., Charlotte, N. C., Mgr., Walter T. Bunce, Phone 2-4073; Technical Service Men: Reid Tull, 116 W. Thomas St., Salisbury, N. C., Phone 1497-J; Philip L. Lavoie, 1211 McCall St., Charlotte, N. C.; John H. Graham, P. O. Box 904, Greenville, S. C., Phone 2922; John R. Brown, P. O. Box 749, Trussville, Ala., Phone 127; Warehouse, 1211 McCall St., Charlotte, N. C.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep.: Textile Supply Co., Dallas, Tex.

ATWOOD MACHINE CO., Stonington, Conn. Sou. Rep.: Fred Sails, Johnston Bldg., Charlotte, N. C.

AUFFMORDT & CO., C. A., 468 Fourth Ave., New York City. Sou. Rep.: George B. Wilkinson, 613 Johnston Bldg., Charlotte, N. C.

BAHNSON CO., THE, Winston-Salem, N. C.

BANCROFT BELTING CO., Boston, Mass. Warehouse and Sou. Distributor, Carolina Supply Co., Greenville, S. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C., J. H. Spencer, Mgr.

BARIUM REDUCTION CORP., S. Charleston, W. Va. Sou. Distributors: American Cyanamid & Chemical Corp.; F. H. Ross & Co., Charlotte, N. C.

BARKLEY MACHINE WORKS, Gastonia, N. C.

BARNES TEXTILE ASSOCIATES, Inc., 10 High St., Boston, Mass. Sou. Office, 318 Montgomery Bldg., Spartanburg, S. C.

BAY STATE TEXTILE CO., 220 Hartwell St., Fall River, Mass. N. C. Agt., John Graham Webb, P. O. Box 844, Hillsboro, N. C. Phone 127-B.

BECCO SALES CORP., Buffalo, N. Y. Sou. Reps.: J. D. Quern and D. S. Quern, 1930 Harris Road, Charlotte, N. C.

BEST & CO., Inc., EDWARD H., Boston, Mass. Sou. Rep.: W. C. Hames, 185 Pinecrest Ave., Decatur, Ga., Phone Dearborn 5974; Ralph Gossett, William J. Moore, 15 Augusta St., Greenville, S. C., Phone 150.

BOND CO., CHAS., 617 Arch St., Philadelphia, Pa. Sou. Reps.: John C. Turner, 107 16th St., N.W., Phone Hemlock 2113, Atlanta, Ga.; Harold C. Smith, Poinsett Hotel, Greenville, S. C.

BORNE, SCRYMSER CO., Works and Offices, 632 S. Front St., Elizabeth, N. J.; Warehouse, 815 W. Morehead St., Charlotte, N. C. Sou. Mgr., H. L. Siever, Charlotte, N. C. Reps.: W. B. Uhler, Spartanburg, S. C.; R. C. Young, Charlotte, N. C.; John Ferguson, LaGrange, Ga.

BRADLEY FLYER & REPAIR CO., 1818 W. Second Ave., Gastonia, N. C.

BREWERTON, E. H., 1019 Woodside Bldg., Greenville, S. C.

BROOKLYN PERFEX CORP., Brooklyn, N. Y. Sou. Repr.: John Batson, Box 841, Greenville, S. C.

BROWN CO., THE DAVID, Lawrence, Mass. Sou. Reps.: Greenville, S. C., Ralph Gossett and Wm. J. Moore; Griffin, Ga., Belton C. Plowden; Dallas, Tex., Russell A. Singleton Co., Inc.; Gastonia, N. C., Gastonia Mill Supply Co.; Chattanooga, Tenn., James Supply Co.; Spartanburg, S. C., Montgomery & Crawford.

BRYANT ELECTRIC CO., 625-27 E. Franklin Ave., Gastonia, N. C.

BURKART-SCHIER CHEMICAL CO., Chattanooga, Tenn. C. A. Schier, W. A. Bentel, W. J. Kelly, Jr., George S. McCarty, T. A. Martin, George Rodgers, care Burkart-Schier Chemical Co., Chattanooga, Tenn.; H. V. Wells, care Burkart-Schier Chemical Co., Nashville, Tenn.; Lawrence Newman, Claude V. Day, care Burkart-Schier Chemical Co., Knoxville, Tenn.; J. A. Brittain, 3526 Cliff Rd., Birmingham, Ala.; Byrd Miller, Woodside Bldg., Greenville, S. C.; Nelson A. Fisher, 1540 Elmdale Ave., Chicago, Ill.

BUTTERWORTH & SONS CO., H. W., Philadelphia, Pa. Sou. Repr.: J. H. Zahn, Johnston Bldg., Charlotte, N. C.

CAROLINA REFRACTORIES CO., Hartsville, S. C.

CARTER TRAVELER CO., Gastonia, N. C. R. D. Hughes Sales Co., 2106 S. Lamar St., Dallas, Tex., Texas and Arkansas; Eastern Rep. (including Canada): C. E. Herrick, 44 Franklin St., Providence, R. I.; European Rep.: Mellor, Bromley & Co., Ltd., Leicester, England.

CHARLOTTE CHEMICAL LABORATORIES, Inc., Charlotte, N. C. Peter S. Gilchrist, Jr., Rep.

CIBA CO., Inc., Greenwich and Morton Sts., New York City. Sou. Offices and Warehouses, Charlotte, N. C.

CLINTON CO., Clinton, Iowa. Sou. Reps.: Luther Knowles, Box 127, Phone 2-2486, Charlotte, N. C.; Grady Gilbert, Box 342, Phone 3192, Concord, N. C.; Clinton Sales Co., Inc., Geo. B. Moore, Box 481, Phone 822, Spartanburg, S. C.; Boyce L. Estes, Box 825, Phone 469, LaGrange, Ga.; Gordon W. Enloe, P. O. Box 851, Gadsden, Ala.; Harold P. Goller, 900 Woodside Bldg., Tel. 3713, Greenville, S. C. Stocks carried at Carolina Transfer and Storage Co., Charlotte, N. C.; Consolidated Brokerage Co., Greenville, S. C.; Bonded Service Warehouse, Atlanta Ga.; Textile Products Distributing Co., Rock Hill, S. C.; Industrial Chemicals, Roanoke Rapids, N. C.

COCKER MACHINE & FOUNDRY CO., Gastonia, N. C.

COLE MFG. CO., R. D., Newnan, Ga.

CORN PRODUCTS REFINING CO., 17 Battery Place, New York City. Corn Products Sales Co., Southeastern Bldg., Greensboro, N. C., W. R. Joyner, Mgr.; Corn Products Sales Co., Montgomery Bldg., Spartanburg, S. C., J. Cantey Alexander, Mgr.; Corn Products Sales Co., Woodside Bldg., Greenville, S. C., J. Alden Simpson, Mgr.; Corn Products Sales Co. (Mill and Paper Starch Div.), Hurt Bldg., Atlanta, Ga., C. G. Stover, Mgr.; Corn Products Sales Co., Comer Bldg., Birmingham, Ala., L. H. Kelly, Mgr. Stocks carried at convenient points.

CURTIS & MARBLE MACHINE CO., 72 Cambridge St., Worcester, Mass. Sou. Reps.: Greenville, S. C., 1000 Woodside Bldg., W. F. Woodward, Tel. 3886; Dallas, Tex., O. T. Daniels, care Textile Supply Co.; Philadelphia, Pa., 794 Drexel Bldg., J. A. Fitzsimmons; New York, N. Y., 200 Fifth Ave., F. C. Bryant.

CUTLER, ROGER W., 141 Milk St., Boston, Mass. Sou. Office, Woodside Bldg., Greenville, S. C. Sou. Agts.: M. Bradford Hodges, 161 Spring St., N.W., Atlanta, Ga.; Jesse Hodges, 1236 E. Morehead St., Charlotte, N. C.; Byrd Miller, Woodside Bldg., Greenville, S. C.

DARY RING TRAVELER CO., Taunton, Mass. Sou. Rep.: John E. Humphries, P. O. Box 843, Greenville, S. C.; John H. O'Neill, P. O. Box 720, Atlanta, Ga.; H. Reid Lockman, P. O. Box 515, Spartanburg, S. C.

DAYTON RUBBER MFG. CO., Dayton, O. Sou. Reps.: William L. Morgan, P. O. Box 846, Greenville, S. C.; J. O. Cole, P. O. Box 846, Greenville, S. C.; Thomas W. Meighan, 1149 St. Charles Place, Atlanta, Ga. Sou. Jobbers: Greenville Textile Supply Co., Greenville Belting Co., Greenville, S. C.; Textile Mill Supply Co., Charlotte, N. C.; Odell Mill Supply Co., Greensboro, N. C.; Young & Van Supply Co., Birmingham, Ala.; Industrial Supply, Inc., LaGrange, Ga.; Textile Supply Co., Dallas, Tex.; T. A. Sizemore, 525 Grove St., Salisbury, N. C.

DENISON MFG. CO., THE. Plant and Sales Offices, Asheville, N. C. Sou. Service Repr.: L. B. Denison, P. O. Box 4072, Asheville, N. C.

DETERGENT PRODUCTS CO., 494 Spring St., N.W., Atlanta, Ga. Offices at: Columbia, S. C., Raleigh, N. C., Texarkana, Ark., Columbus, Ga.

DODENHOFF CO., W. D., 619 Rutherford St., Greenville, S. C.

DRAPER CORPORATION, Hopedale, Mass. Sou. Offices and Warehouses, Spartanburg, S. C., Clare H. Draper, Jr.; Atlanta, Ga., 242 Forsyth St., S.W., W. M. Mitchell.

DU PONT DE NEMOURS & CO., Inc., E. I., Electrochemicals Dept., Main Office, Wilmington, Del.; Charlotte Office, 414 S. Church St., LeRoy Kennette, Dist. Sales Mgr. Reps.: J. L. Moore, Technical Man; N. P. Arnold, 2386 Alston Dr., Atlanta, Ga., Technical Service Man; O. S. McCullers, 208 McPherson Lane, Greenville, S. C., Tech. Repr.

PAUL B. EATON, 218 Johnston Bldg., Charlotte, N. C.

EMMONS LOOM HARNESS CO., Lawrence, Mass. Sou. Plant, 118½ W. Fourth St., Charlotte, N. C., George Field, Mgr.; Clifton E. Watson, Mgr. Sou. Sales. Wm. S. Taylor, Supt. Charlotte Plant, Box 2036, Tel. 3-7503; Arthur W. Harris, Harris Mfg. Co., Agt., P. O. Box 1982, Phone Main 2643, Atlanta, Ga.; Alvin Braley, Southwest Supply Co., Agt., P. O. Box 236, Phone 170, Itasca, Tex.

ENGINEERING SALES CO., 217 Builders' Bldg., Charlotte, N. C., and Allen Bldg., Greenville, S. C.; S. R. and V. G. Brookshire.

FIDELITY MACHINE CO., 3908-18 Frankford Ave., Philadelphia, Pa. Sou. Reps.: John E. Fox, 1011 W. Palmer St., Charlotte, N. C.; R. C. Aycock, 911 Provident Bldg., Chattanooga, Tenn.

FOSTER MACHINE CO., Westfield, Mass. Sou. Offices, 509 Johnston Bldg., Charlotte, N. C.

FRANKLIN PROCESS CO., Providence, R. I. Sou. Plants, Southern Franklin Process Co., Greenville, S. C.; Central Franklin Process Co., Chattanooga, Tenn.

FULBRIGHT LABORATORIES, Inc., 205-6-7 Latonia Bldg., Charlotte, N. C. C. O. Fulbright.

FULTON BAG & COTTON MILLS, P. O. Box 1726, Atlanta, Ga.

GASTONIA BELTING & SUPPLY CO., Gastonia, N. C.

GASTONIA BRUSH CO., Gastonia, N. C.

GENERAL COAL CO., 1217 Johnston Bldg., Charlotte, N. C. J. W. Lassiter, Sou. Sales Mgr.; Frank W. Reagan, Asst. Sou. Sales Mgr. Reps.: G. P. W. Black, 107 McPherson Lane, Greenville, S. C.; H. G. Thompson, 97 Tacoma Circle, Asheville, N. C.; Guy H. Sowards, 2011 Fairview Road, Raleigh, N. C.; Hugh D. Brower, 2715 Lenox Road, Atlanta, Ga.; H. C. Sturtevant, 210 E. Franklin St., Office No. 5, Richmond, Va.; Dudley H. R. Wigg, 403-404 National Bank of Commerce Bldg., Norfolk, Va.; W. A. Counts, Res. Mgr., Law and Commerce Bldg., Bluefield, W. Va.; Dave B. Smith, Charlotte, N. C. Combustion Engineers, E. H. Chapman, Charlotte, N. C.; J. E. Campbell, Charlotte, N. C.

GENERAL DYESTUFF CORP., 435 Hudson St., New York City. Sou. Office and Warehouse, 2459 Wilkinson Blvd., Charlotte, N. C., B. A. Stigen, Mgr.

GILL LEATHER CO., Salem, Mass. Sou. Reps.: Belton C. Plowden, Griffin, Ga., Tel. 125; Mrs. W. G. Hamner, Gastonia, N. C., Tel. 229; Ralph Gossett, 15 Augusta St., Greenville, S. C., Tel. 150; Wm. J. Moore, P. O. Box 1523, Greenville, S. C., Tel. 150.

GLOBE WOVEN BELTING CO., 1396-1398 Clinton St., Buffalo, N. Y. Sou. Sales Rep.: William A. Prince, Hendersonville, N. C.

GOSSETT MACHINE WORKS, Franklin Ave., Ext., Gastonia, N. C.

GREENSBORO LOOM REED CO., Greensboro, N. C. Phone 5678. Geo. A. McFetters, Mgr., Phone 2-0205. A. A. "Red" Brame, Repr.

GREENVILLE BELTING CO., Greenville, S. C.

GULF OIL CORPORATION OF PA., Pittsburgh, Pa. Division Offices: Atlanta, Ga.—A. M. Wright, Greenville, S. C.; W. G. Robertson, Jr., Spartanburg, S. C.; J. H. Hooten, Gastonia, N. C.; R. G. Burkhalter, Charlotte, N. C.; G. P. King, Jr., Augusta, Ga.; Boston, Mass.; New York, N. Y.; Philadelphia, Pa.; New Orleans, La.; Houston, Tex.; Louisville, Ky.; Toledo, O.

H & B AMERICAN MACHINE CO., Pawtucket, R. I. Sou. Offices, 815 The Citizens and Southern National Bank Bldg., Atlanta, Ga., J. C. Martin, Agt.; Johnston Bldg., Charlotte, N. C., Elmer J. McVey, Mgr.; Fritz Zweifel, Fred Dickinson, Jim Miller, sales and service representatives.

H. & P. SPOOL & BOBBIN CO., Lawrence, Mass. Sou. Distributors: The Textile Mill Supply Co., Charlotte, N. C.; Columbus Iron Works Co., Supply Dept., Columbus, Ga.; Textile Supply Co., Dallas, Tex.

HART PRODUCTS CORP., 1440 Broadway, New York City. Sou. Mgr., Charles C. Clark, Box 274, Spartanburg, S. C. Sales Rep.: L. M. Boes, Box 517, Charlotte, N. C.

HERSEY, HENRY H., 44 Norwood Place, Greenville, S. C. Selling Agent for A. C. Lawrence Leather Co.

HOUGHTON & CO., E. F., 303 W. Lehigh Ave., Philadelphia, Pa. Sou. Reps.: W. H. Brinkley, Gen. Sales Mgr., Sou. Div., 1301 W. Morehead St., Charlotte, N. C. Sou. Reps.: C. L. Elgert, 7 St. Paul St., Baltimore, Md.; T. E. Hansen, Box 398, Glen Allen, Va.; S. P. Schwoyer, 302½ Otteray Drive, P. O. Box 1507, High Point, N. C.; C. G. Schultze, 1301 W. Morehead St., Charlotte, N. C.; L. L. Brooks, 100 Jones Ave., Greenville, S. C.; J. J. Reilly, 2788 Peachtree Road, Atlanta, Ga.; V. C. Shaden, P. O. Box 925, Chattanooga, Tenn.; J. W. Byrnes, 701 N. San Jacinto, Houston, Tex.; H. J. Reid, 212 Lamont Drive, Decatur, Ga. (Size Demonstrator); W. C. McMann, Textile Sales Dept., 1301 W. Morehead St., Charlotte, N. C.; W. A. Isenberg, Lubrication Engineer, 1301 W. Morehead St., Charlotte, N. C.

HOUGHTON WOOL CO., 253 Summer St., Phone Liberty 1875, Boston, Mass. Sou. Rep.: Jas. E. Taylor, P. O. Box 2084, Phone 3-8692, Charlotte, N. C.

HOWARD BROS. CO., Worcester, Mass. Sou. Office and Plant, 244 Forsyth St., S.W., Atlanta, Ga.; Guy L. Melchor, Sou. Agent; S. W. Reps.: Russell A. Singleton Co., Inc., Mail Route 5, Dallas, Tex.; J. Floyd Childs, 244 Forsyth St., S.W., Atlanta, Ga.; Carl M. Moore, 833 York St., Gastonia, N. C.

IDEAL MACHINE CO., Bessemer City, N. C.

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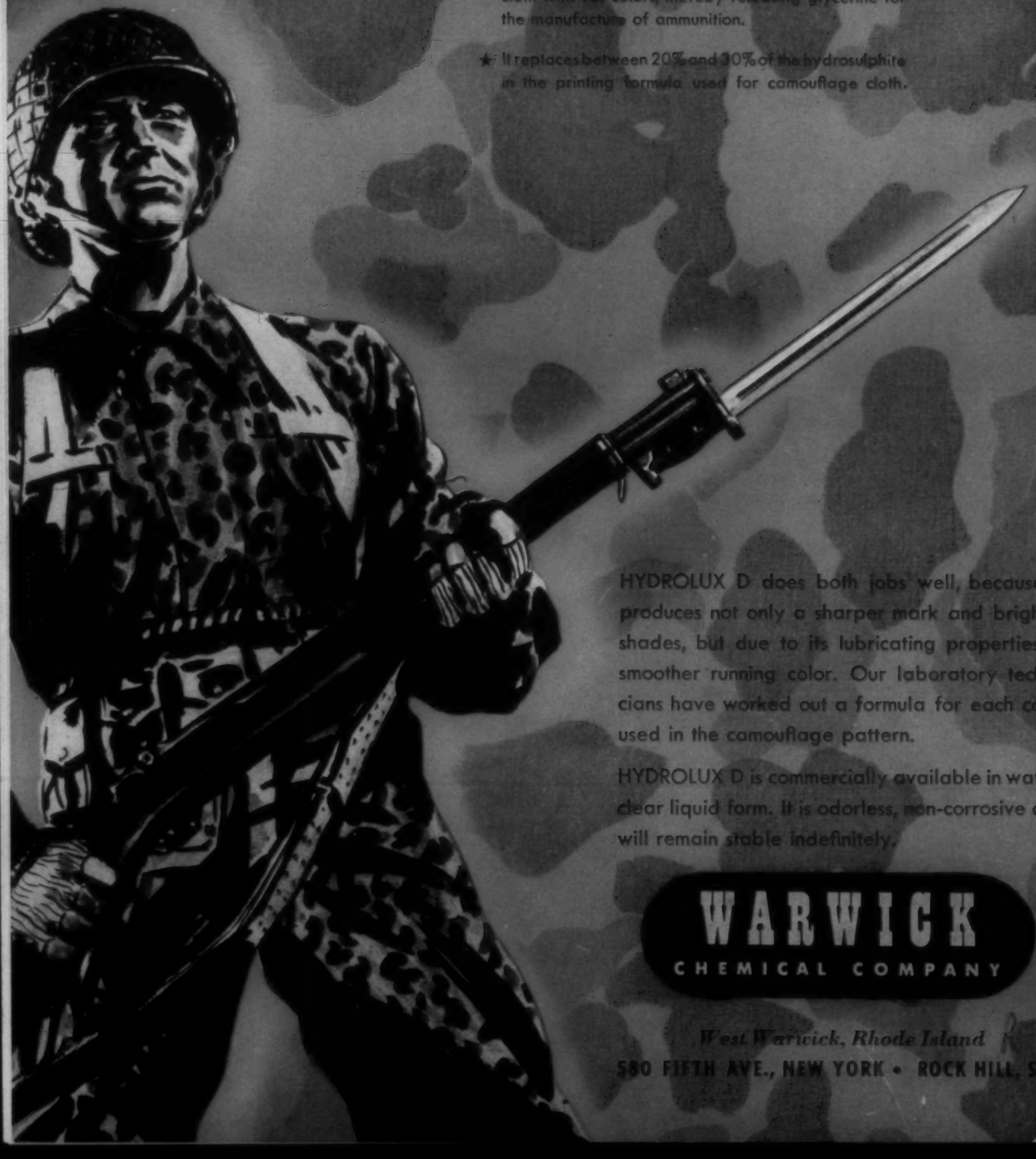

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